April 1, 2023

Dr. Mike Hegedus
School of Engineering Science
Simon Fraser University
British Columbia, V5A 1S6

RE: ENSC 405W Final Proposal Document for Company 2

Dear Dr. Mike Hegedus,

The attached document is the final proposal for ScootPilot, the advanced driver assistance system for electronic kick-scooters proposed by ADAScooter. Our company is made up of a talented mix of senior engineering students with various academic backgrounds including: Biomedical, Systems, Electronics and Computer engineering majors.

ScootPilot is a technology oriented solution to safety concerns surrounding E-scooters being used within city limits and generally crowded public spaces. This document will cover important aspects of the project including: product lifecycle, involved risks and benefits, in-depth market analysis, financial and company details, and project planning.

ADAScooter can be contacted about any questions and concerns regarding this document through our CCO, Alejandro Lorenzo-Luaces, who can be reached at alorenzo@sfu.ca.

Enclosure: Final Proposal Document

Sincerely,

Alejandro Lorenzo-Luaces, CCO

Signature of CCO

SIMON FRASER UNIVERSITY

ENGAGING THE WORLD

Project Proposal

Modular E-Scooter Advanced Driving Assistance System (ADAS)

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Abstract

The growing popularity of electric scooters as a convenient and eco-friendly mode of transportation has raised concerns about the safety of riders and pedestrians in densely populated urban areas. To address this issue, ADAScooter is developing a safety device called ScootPilot. This device utilizes advanced driver assistance system (ADAS) technology to constantly monitor the surrounding environment for potential hazards and adjust the speed of the e-scooter accordingly. The key objective of ScootPilot is to prioritize the safety of all individuals in the vicinity by preventing accidents or collisions. ScootPilot incorporates a radar sensor for obstacle detection, a speed controller to limit the speed of the e-scooter, and in emergency scenarios, an automatic brake to bring the e-scooter to a full stop safely. Reducing speed is known to be one of the best ways to avoid collisions and it is the relatively high velocity difference between pedestrians and e-scooters which poses a high risk of an accident.

The development of ScootPilot is divided into 3 stages being proof-of-concept, engineering prototype and production phase, with each version adding new features while improving previous ones. By production phase, ScootPilot will be optimized for mass production and profits while maintaining a refined UI/UX,

There are risks involved with ScootPilot which include over-reliance on the system, potential government restrictions, and user acceptance. Benefits however include a reduced risk of e-scooter collisions, public compliance with regulations and road safety, and economic benefits. The success of ScootPilot depends on the user's behavior and decision-making, government decisions, and marketing efforts to encourage user acceptance. Ultimately, the system can contribute to the adoption of more sustainable forms of transportation by making e-scooters a safer alternative.

While the E-scooter market is rapidly growing, it is also highly competitive. ADAScooter however may have a competitive advantage by increasing the user base as currently a majority of riders are men due to safety concerns women have surrounding the use of E-scooters. ScootPilot could influence many people which were previously concerned with safety to become new users. Consequently, the current higher male proportion of riders are more likely to take risks which could lead to collisions, which would compel E-scooter rental companies to incorporate safety products such as ScootPilot.

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Glossary

Term	Definition
ADAS	Advanced Driver Assistance Systems
CAD	Computer-aided Design
CAGR	Compound Annual Growth Rate
E-scooter	Electronically Propelled Kick-scooter
LCD	Liquid Crystal Display
PCB	Printed Board Circuit
ROI	Return of Investment
SDOT	Seattle Department of Transportation
UI	User Interface
UX	User Experience

1. Introduction

1.1 Purpose

ADAScooter is currently developing an innovative safety device, named ScootPilot, that utilizes advanced driver assistance system (ADAS) technology to address the safety concerns associated with the use of electric scooters in densely populated urban areas. The device aims to minimize the risk of accidents to both e-scooter riders and pedestrians by constantly monitoring the surrounding environment for potential hazards and promptly adjusting the speed of the e-scooter accordingly. Additionally, the system will alert the user of any potential collisions to further prevent accidents. The key objective of ScootPilot is to prioritize the safety of all individuals in the vicinity. The device incorporates a radar sensor for obstacle detection, a speed controller to adjust the speed of the e-scooter, and in severe cases, a brake to bring the e-scooter to a full stop safely.

1.2 Background

The province of British Columbia in Canada has initiated a 3-year pilot program for electric scooters to accommodate the increasing demand for alternative modes of transportation [1]. The program is expected to result in a significant rise in the number of e-scooter trips, which has raised concerns about the safety of riders and pedestrians in urban areas. This concern is particularly relevant given the lack of safety devices on most e-scooters currently available on the market. A similar pilot program was introduced in the city of Seattle, WA in Fall 2020. According to a report by the Seattle Department of Transportation (SDOT), over 260,000 unique riders took over 1.4 million trips within the first year of the program [2]. With this anticipated growth in e-scooter usage, ScootPilot presents a solution that could significantly enhance rider and pedestrian safety by identifying the cause of collisions and preventing them before they occur.

1.3 Scope

ADAScooter's project to develop the ScootPilot device is divided into three phases: proof-of-concept, engineering prototype, and production. The project planning for each phase involves identifying and documenting specific project goals, deliverables, tasks, costs, and deadlines. Each phase is critical to the success of the project, and ADAScooter's team is committed to achieving the project goals within the specified timelines and budgets.

1.3.1 Proof-of-concept Phase

The proof-of-concept phase of ADAScooter's ScootPilot project will involve testing the feasibility of the device's key functions. This phase will entail building a simple prototype that showcases the essential parts of the device and tests their proper functionality. The prototype will not resemble the final version in size or appearance but will serve as a platform to test and refine

the device's fundamental features. This phase will be critical in identifying any potential design or functional issues and validating the core concept of the ScootPilot device. Through this phase, the team will be able to determine whether the project is feasible and identify any potential challenges that need to be addressed in the subsequent phases.

During the proof-of-concept phase, the team at ADAScooter will connect the Aconeer XE121 radar to a Raspberry Pi 4B, as depicted in Figure 1. Both components in addition to the speed controller and a power bank will be housed inside a secure case attached to the headset of the e-scooter. Figure 2 shows the CAD drawing of the case where it is mounted to the headset of the e-scooter.

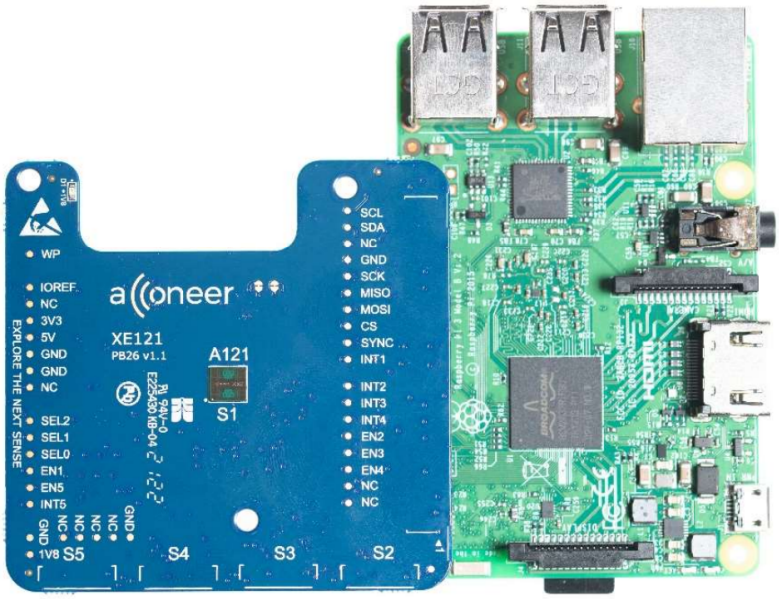

Figure 1: Aconeer XE121 Radar Connected to A Raspberry Pi 4B

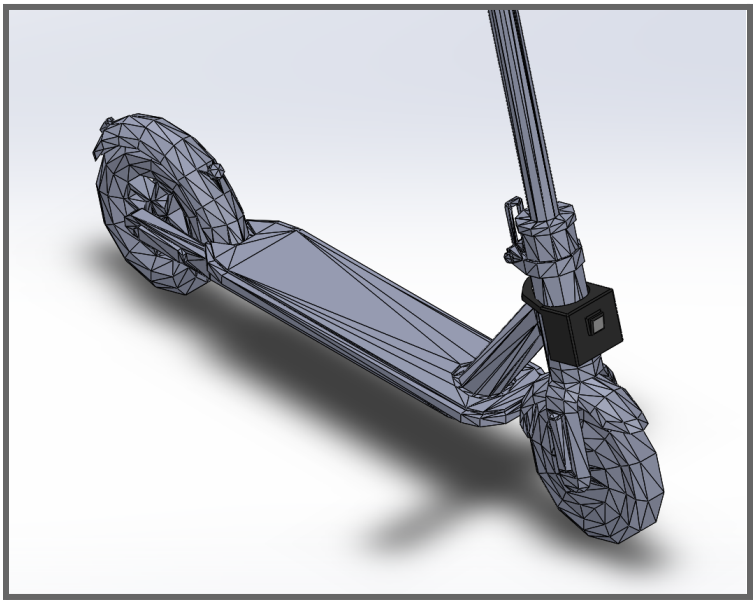

Figure 2: CAD Drawing of the Case Housing Radar and Raspberry Pi

1.3.2 Engineering Prototype Phase

The engineering prototype phase will involve implementing several additions and improvements to the ScootPilot device, including integrating the speed controller and brake system and improving the user interface. Additional implementations are listed below:

- UI and UX by adding a LCD
- Audible alert system by adding a speaker
- Improving electronics by a custom PCB
- Implementing an emergency braking system

1.3.3 Production Phase

During the production phase, ADAScooter aims to optimize ScootPilot for mass production. This will involve selecting cost-effective materials that minimize waste, streamlining the device's modularity for compactness, providing a user-friendly manual for installation and use, improving the UX/UI for easy user interaction, and enhancing the obstacle detection algorithm to ensure maximum accuracy and safety.

2. Risks and Benefits

ScootPilot encounters a number of risks on the business side as well as the challenges it may face in the society. Similarly, this product provides various benefits to the individuals riders and pedestrians alike, also as a business that plays a role in making e-scooters a safer alternative for mass scale adoption towards more sustainable forms of transportation.

2.1 Risks

There are various risks associated with the use of this modular system which relate to the user, other road users, as well as business risks or potential obstacles the start-up may encounter in the future stages of development.

2.1.1 Over-reliance of the user on the ADAS

The risk of over-reliance on the ADAS in ScootPilot is an important consideration for this safety solution. While the system aims to enhance the safety of scooter use, it is not meant to replace the user’s role as the operator of the vehicle, and their responsibility to drive in accordance with the law and safety precautions. The goal is to have a system that reduces the risk of accidents based on environmental data, yet the neglection of the driver of the rules and regulations of road use, as well as their inability to safely ride the scooter can indeed impose a risk of collisions. It is therefore important to educate the user on the limitations of the ScootPilot and the importance of responsible driving.

Ultimately, the ScootPilot system is designed to provide an added layer of safety for the user, and pedestrians in densely populated urban areas. However, its effectiveness also depends on the user's behavior and decision making. By understanding the system’s limitations and

importance of responsible driving, the user can maximize the benefits of ScootPilot while minimizing the risks associated with over-reliance on the system.

2.1.2 Government Restrictions after the end of the Pilot Program

The motive behind our company's idea for this product is the rise of the number of scooters used on BC roads, as allowed by the Pilot Program. This program however is set out to continue until April 2024 [3], and its extension or permanency is still yet to be decided by the government. It is also not clear which cities would opt in or out of permissive laws for e-scooter use in the future. Moreover, it is important to note that while e-scooters are gaining worldwide popularity, they are still illegal to be used in certain places. In the United Kingdom for example, the use of privately owned e-scooters is not allowed on public roads to this day [4]. Therefore, the success of ScootPilot is partially dependent on the government's decision.

2.1.3 User Acceptance

While the ScootPilot device aims to add a layer of safety to e-scooter use, it is possible that not all riders will accept it. Many may view this as an unnecessary add-on that disrupts their traditional riding experience. Even though this does not pose a risk on the ability of the product itself in enhancing the safety of the rider and pedestrians, this potential lack of acceptance may limit the overall success of the product for the startup, company's profitability, as well as its marketability. To overcome this challenge, ADAScooter should emphasize the benefits of the safety device in its marketing to incentivize its use, and have open lines of communication with its clients and targeted users, to refine and improve the product accordingly.

2.2 Benefits

2.2.1 Reduced risk of e-scooter collisions

A significant benefit of the ScootPilot offers is reducing the chances of e-scooter collisions. With the rising popularity of e-scooters, especially in dense urban areas, the risk of accidents involving e-scooters has also increased. The ScootPilot device utilizes ADAS technology by constant monitoring of the environment for potential hazards, and promptly adjusts the speed accordingly. This proactive approach greatly reduces the risk of e-scooter collisions and adds a layer of safety for the rider and pedestrians. The ScootPilot device can therefore play a crucial role in ensuring the safe use of e-scooters and preventing accidents.

In addition, by reducing the likelihood of accidents, insurance companies can potentially save money on payouts and claims. This could lower insurance premiums for e-scooter riders as well, which makes the use of e-scooters more accessible and affordable for a wider range of individuals. Therefore, the ScootPilot not only enhances safety on the roads, but also has economic benefits for both individuals and businesses.

2.2.2 Compliance with Regulations and Road Safety

One of the key benefits of the ScootPilot is its ability to promote road safety and compliance with traffic laws. The ADAS technology's constant monitoring of the environment and adjusting the e-scooter speed accordingly, ensures that the rider adheres to speed limit and safer riding practices. As a result, this technology not only benefits the user, but also contributes to the overall safety of the community. It can also have a positive impact on the public perception of micromobility and alternative modes of transportation.

Furthermore, as the result of safer roads and reduced number of accidents, the costs of the operation of emergency vehicles and healthcare services could also be reduced. This allows the government to allocate their resources more efficiently and make effective decisions on the regulations and infrastructure needed for e-scooters. Therefore, ScootPilot technology not only benefits the riders and pedestrians by promoting compliance with regulations and road safety, but also has a positive impact on the community as a whole by reducing traffic and costs for the government.

3. Market Analysis

ADAScooter is entering a highly competitive market, with several established players already present. However, our unique solution of speed adjustment and a modular system that can be implemented on any e-scooter in the market gives us a distinct advantage. By catering to the needs of safety-conscious consumers, we believe that ADAScooter can establish itself as a significant player in the market.

3.1 Market Definition

ScootPilot is a safety device that can benefit many. Besides the safety of the riders, consisting of the general population, and the people in the vicinity, preventing accidents can also benefit insurance companies and the city. In addition, maintenance costs for e-scooter rental companies will significantly drop as the number of accidents is reduced, resulting in less damage to the e-scooters. Since the use of e-scooters is growing among youth and younger adults, parents will also benefit from ScootPilot to maximize the safety of their children. Overall, the implementation of ADAScooter technology in e-scooters can lead to a safer and more efficient mode of transportation for everyone.

Our main target market will initially be e-scooter rental companies which have amassed large fleets. The ability to retrofit ScootPilot onto their existing fleets is one of ADAScooters main advantages. As business relationships are made, the future of ADAScooter will be with e-scooter manufacturers. Ideally ScootPilot would be manufactured along with new e-scooters, as integration straight from the production would result in the best product.

3.1.1 Demographics

A study from Portland State University, Oregon, based on 700,000 trips discovered that 66 percent of riders are men and only 34 percent of trips were made by women. Data from Austin, Texas suggests a similar conclusion [5].

The analysis of E-Scooter and dockless bikes share data in the U.S. depicts that 75% of trips on micro-mobility are made by men, and the rest 25% are by women. Moreover, the perception of the public on eScooter by Gender is mentioned below, showing how much they like and appreciate it [6].

With respect to income, rentable e-scooter company Lime reported that 54% of users have annual household income of $50,000 or less in San Diego. UC Berkeley transportation researcher Susan Shaheen suggests that lower income users who can't afford cars may welcome the idea of e-scooters [7]. According to a census in San Diego, the median household income is 83,000 USD [8]. This suggests that a vast majority of e-scooter riders are below the median household income.

Bird found that 50% of rider share scooters are used to get to and from work and additionally, 29% of e-scooter riders use e-scooter sharing programs to connect to the Metro and the bus [9]. 23% of Bird users reported that e-scooters replaced a ride-hail or taxi trip [9].

3.1.2 Size

The size of the e-scooter market is exponentially growing. In Calgary, a pilot e-scooter program was introduced with 1500 scooters available for use in 2019 and increased to 2500 in 2020. In the year of 2020, 1.7 million trips on electric vehicles with 90% of those being e-scooters were taken [10]. Similar results are being found in pilot programs launched all around Canada in cities such as Ottawa [11], Richmond BC and Hamilton ON. Figure 3 highlights the global growth of the e-scooter market [12]

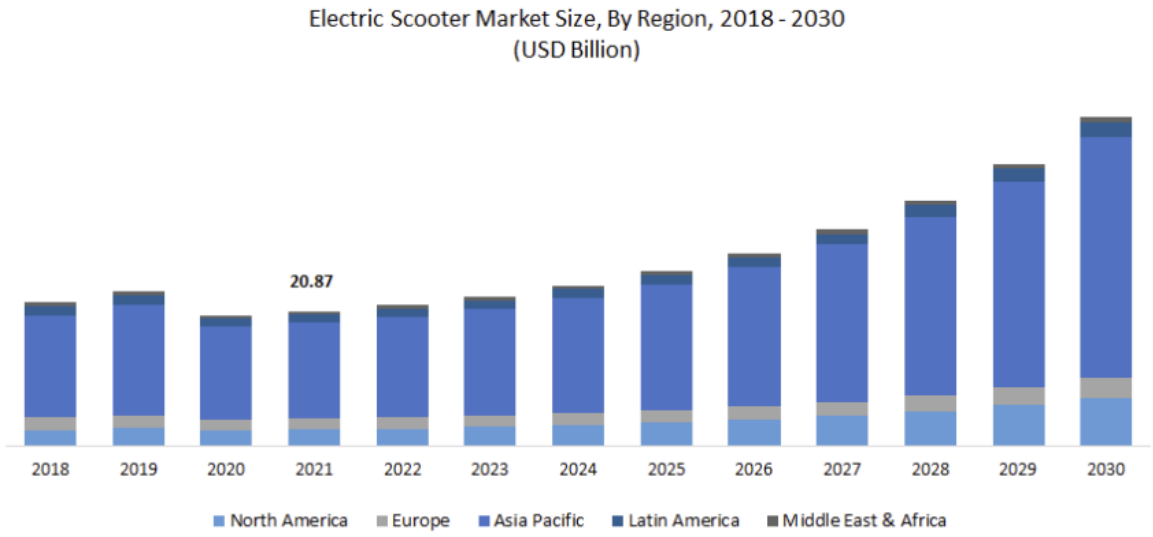

Figure 3: Global Electric Scooter Market Size

North America is projected to see significant adoption of e-scooters for transportation in the next decade. Pacific Asia is set to be the largest growth in market size and continues to dominate the market in the present day.

3.1.3 Growth

The e-scooter market is a high growth market globally, with Asia Pacific expecting to lead the market with 26.25 billion by 2030 due to high investment in electrical vehicle charging infrastructure and collaborations with electrical vehicle makers [13]. The global electric scooter market was estimated at USD 33.18 billion in 2022 and is projected to register a compound annual growth rate (CAGR) of 9.9% from 2023 to 2030 [13]. This exponential adoption of e-scooters can be attributed to many factors. One is the increasing price of petroleum based fuel, significantly lower cost of maintenance compared to petroleum based vehicles and consumers making an environmentally conscious choice switching to electric powered vehicles. The e-scooter sales in the US specifically is expected to have a CAGR of 8.9% up to 2030, highlighted in Figure 4.

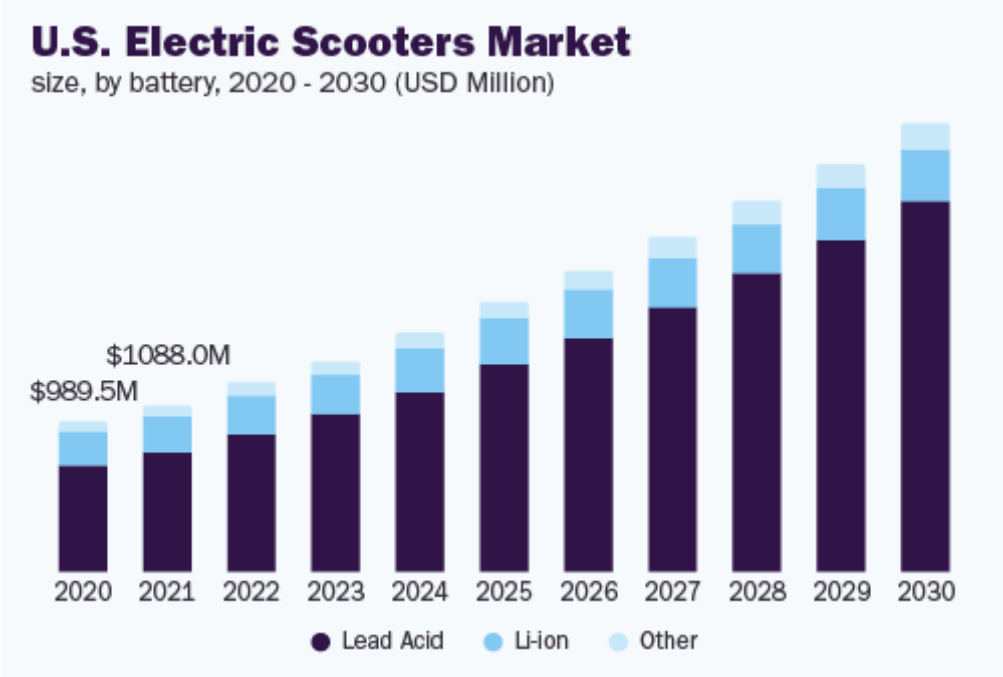

Figure 4: U.S. Electric Scooter Market

One major market target market for ADAScooter is the rideshare companies and related manufacturers. Two of the leading e-scooter ride companies in the US, Bird and Lime apps increased their monthly downloads by 580% between the months of January and July 2018, showing the demand and growing popularity of e-scooter ride share apps. The downloads reached more than 880,000 in the United States in the single month of July 2018 [14]. This trend continues to the present day, with Lime and Bird expanding to Asia, South America, Europe and Oceania [15].

3.2 Market Need

E-scooters provide an excellent method of affordable, green and convenient form of transportation. However, it can be dangerous to ride e-scooters especially in densely populated urban areas such as London where Transport for London said that 98 people were badly injured and three people were killed from e-scooter usage [16]. E-scooters are not the only ones at risk of harm as pedestrians are vulnerable to being hit by e-scooter riders. Children in particular are vulnerable as they may not be able to anticipate or move as quickly to get out of the way of an e-scooters path [17]. On average, riders need medical treatment for injuries involving e-scooter usage for every 3.1 years of use [17]. Although competitors provide an ADAS system for e-scooters, ADAScooter is distinct from its competitors as we work directly with manufacturers to provide a cost effective ADAS system, as opposed to competitors like Segem which sells individual scooters at a price point of $3000 CAD. A poor record of safety greatly hinders ride share companies such as Lime and Bird who are launching e-scooter ride share pilot programs across the US and Canada in cities such as Richmond BC [18]. By partnering with e-scooter ride share companies and by induction, their e-scooter suppliers, ADAScooter will make e-scooters safer, allowing for partnering companies to renew and expand e-scooter ride share contracts with cities and ultimately increasing profits and ride-share usage.

3.3 ROI Estimate and Sales Forecast

To reach commercialization, ADAScooter estimates an initial seed investment of approximately $800 CAD to create a product prototype. After validation and testing, developing a final product to market will cost an additional $1000. ADAScooter aims for a target production budget of $300 per unit system installed. Each unit installed will cost $325 with a net profit margin of 25$ per unit sold. The production cost is much less than the cost of the prototype, however ADAScooter anticipates cutting costs in the form of bulk buying components, creating a custom PCB for the radar sensor and microprocessor instead of using a Acconeer evaluation board for the sensor and Raspberry Pi 4B. ADAScooter expects to provide engineering samples to potential partners, staying negative for the first year. However, in Q2 2024, we expect a significant ramp in production and demand once partners have utilized engineering samples. Figure 5 highlights the projected net profit of the ScootSafe system. ADAScooter is predicting a CAGR of 6% assuming an initial sale of a ScootPilot system every week with net profits reinvested into production, manufacturing and marketing operations.

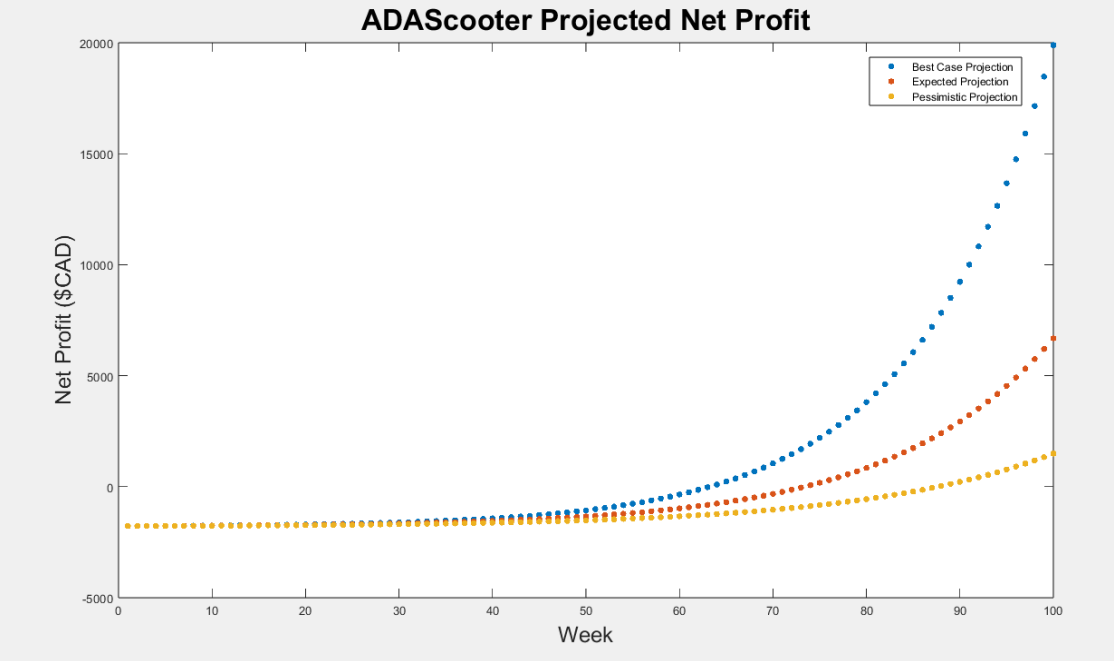

Figure 5: Projected net profit of the ScootPilot system

ADAScooter expects to be net positive by week 74 and have a net profit of approximately ~7000 CAD by Q1 2025.

3.4 Competition

The market has two main competitors, namely Segem NEV, and Garmin Varia. The following sections provide a brief overview of each company.

3.4.1 Segem NEV

Segem Micromobility is a Swedish company that specializes in manufacturing e-scooters. Their latest product, NEV shown in Figure ?, is equipped with a radar and utilizes ADAS technology. While Segem is a main competitor to ADAScooter, their ADAS system is integrated into their own e-scooter and is not modular or compatible with other e-scooters. Furthermore, their e-scooter is relatively expensive compared to other models on the market, priced around €2100. Currently, NEV is out of stock on Segem's website and only available for pre-order in select European countries [19].

Figure 6: The NEV Segem E-scooter

3.4.2 Garmin

Garmin Ltd. is another competitor that operates as a multinational technology company headquartered in Switzerland and the US. They offer the Varia RTL515 shown in Figure 7, a radar tail light designed for bicycles that alerts riders of approaching vehicles from behind through their smartphones and it costs $269.99 CAD. However, unlike ScootPilot, it neither adjusts the vehicle's speed nor monitors the surrounding obstacles in front of the vehicle. Nevertheless, as a large company, Garmin has the potential to replicate ADAScooter's approach by leveraging its established production pipeline and brand recognition [20].

Figure 7: The Garmin Varia RTL515

4. Finances

4.1 Project Costs

Table 1 below summarizes a compiled list of each part used for the ScootPilot and their respective costs. The product's total cost is $874.08 CAD.

Component Name	Quantity	Price per unit	Price total
Raspberry Pi 4B	1	92.35	92.35
Acconeer XE-121 Eval board	1	236.48	236.48
TX2-3V Relays	2	10.88	21.76
Gyrocopter 3.0	1	265.00	265.00
Waveshare 5" Capacitive LCD Display	1	71.95	71.95
Odseven USB Mini Speakers	1	11.25	11.25
Charmast 10400 Power Bank	1	42.99	42.99
DF Robot Dual Motor Controller	1	19.22	19.22
Cytron 12V 75RPM Spur Gearmotor	1	19.43	19.43
		Tax PST(7%) + GST(5%) 12%	93.6516
		Total	874.08

Table 1: Summary of Cost Breakdown of ScootPilot

4.2 Funding Sources

In order to fund the development of the ScootPilot, ADAScooter will seek non-dilutive funding in the form of grants and endowment funds. To ensure the success of the development of the ScootPilot prototype and make the product as competitive as possible with companies such as Gamin, and Segem, ADAScooter will need as much funding as possible. Below are potential funding sources that ADAScooter will apply for.

- **The Wighton Engineering Development Fund**: The Wighton Engineering Development Fund provides funding for engineering projects and is managed by Dr. Andrew Rawicz. ADAScooter is an exceptional applicant for the Wighton Engineering Development Fund as ScootPilot is focused on the safety and wellbeing of all road users which benefits society. We will be applying to this fund in April 2023.
- **The Engineering Science Student (ESSS) Endowment Fund**: The Engineering Science Student Endowment Fund provided funding for entrepreneurial engineering projects that promote innovation. ScootPilot will be applying to this fund in April 2023.

5. Company Details

5.1 Vision

Since its formation on January 10, 2023, ADAScooter has been committed to promoting safety on roads and transportation. Our company's vision is to make transportation safer for everyone, and we strive to achieve this by developing innovative and effective safety solutions for electric scooters. With our ADAS technology, we aim to significantly reduce the risk of accidents and promote the widespread adoption of electric scooters as a safe and sustainable mode of transportation.

5.2 Meet The Team

Chris Tesar
Chief Technology Officer
Computer Engineering
Expertise: Software Development

A 4th year Computer Engineering student, Chris is passionate about developing software that has real world impact. Chris was an undergraduate research assistant, working on embedded software that is used to interface with a three loop antenna system, which has applications in measuring brain waves. Chris also worked as a software engineer intern at LMI Technologies, writing software that interacts with sensors that are able to create high precision 3D images and models. In Chris's free time, Chris likes to run, read books and develop games.

Gregory Sheppard
Chief Operating Officer
Electronics Engineering
Expertise: Embedded Systems, Hardware Verification

Gregory currently works at Andes Technology developing and verifying RISC-V processor IP for the global market. He is a 4th year Electronics Engineering student at SFU and is in his second to last semester. Greg's expertise lies in low level embedded programming with C and RISC-V assembly, as well as SystemVerilog hardware description and verification. He has 2 cats, enjoys hiking and kayaking around BC, and builds emulators in his spare time.

Robert Respicio
Chief Executive Officer
Computer Engineering
Expertise: Embedded systems, Project management

Robert first started his engineering journey in his high school STEM and robotics club. Since then he has programmed vital firmware for ARM Cortex microprocessors during his co-ops and managed a team in multiple engineering competitions.

Pouria Khodabakhsh
Chief Legal Officer
Systems Engineering
Expertise: User Interaction, Mechanical Integration

Pouria is a 4th year systems engineering student. At SFU he worked as an undergraduate researcher on autonomous robot navigation using sounds from the environment, and recently worked in an internship role to automate and optimize various production processes at StructureCraft. He enjoys nature hikes, and is passionate about music and visual arts.

Alejandro Lorenzo-Luaces
Chief Communications Officer
Systems Engineering
Expertise: Mechanical Integration, Robotics

Alejandro is in the last few semesters of his systems engineering undergrad and is more excited than ever to partake in innovative and cutting edge projects. He brings a wide breadth of mechanical experience to the team from being a curious hobbyist at heart. He is ready to apply his skills and leveredge previous experiences wherever fit.

Makan Mousavifard
Chief Financial Officer
Biomedical Engineering
Expertise: Wearable devices, Cardiovascular Disease

Makan is a highly motivated 5th year biomedical engineering student with a passion for human biology and disease research. He is dedicated to utilizing his skills and knowledge in the field of biomedical engineering to develop innovative solutions and medical devices that can improve the quality of life for patients. With a strong interest in the intersection of engineering and medicine, Makan is committed to advancing the healthcare industry and contributing to the betterment of society through his work.

6. Project Planning

ADAScooter has made many strides and passed many milestones with regards to product development of the ScootPilot product. We also have further goals and milestones to be met within the coming months. On the next page are the charts outlining the project schedule from January 2023 until the end of August. Milestones from April are predicted and have not yet passed as of the writing of this document.

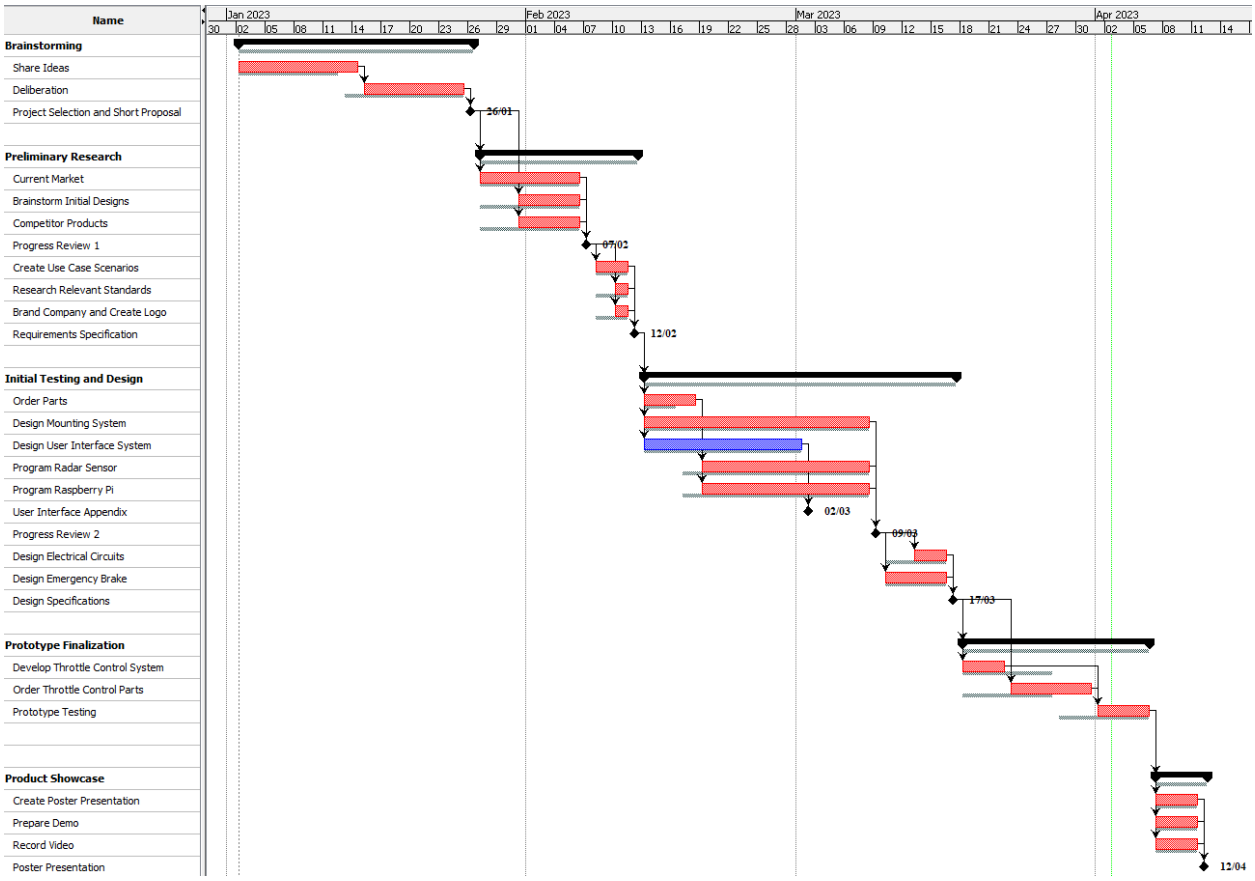

Figure 8: ADAScooter Gantt Chart for the development of the ScootPilot through April. Predicted schedule is shown in grey while actual progress is shown in colour.

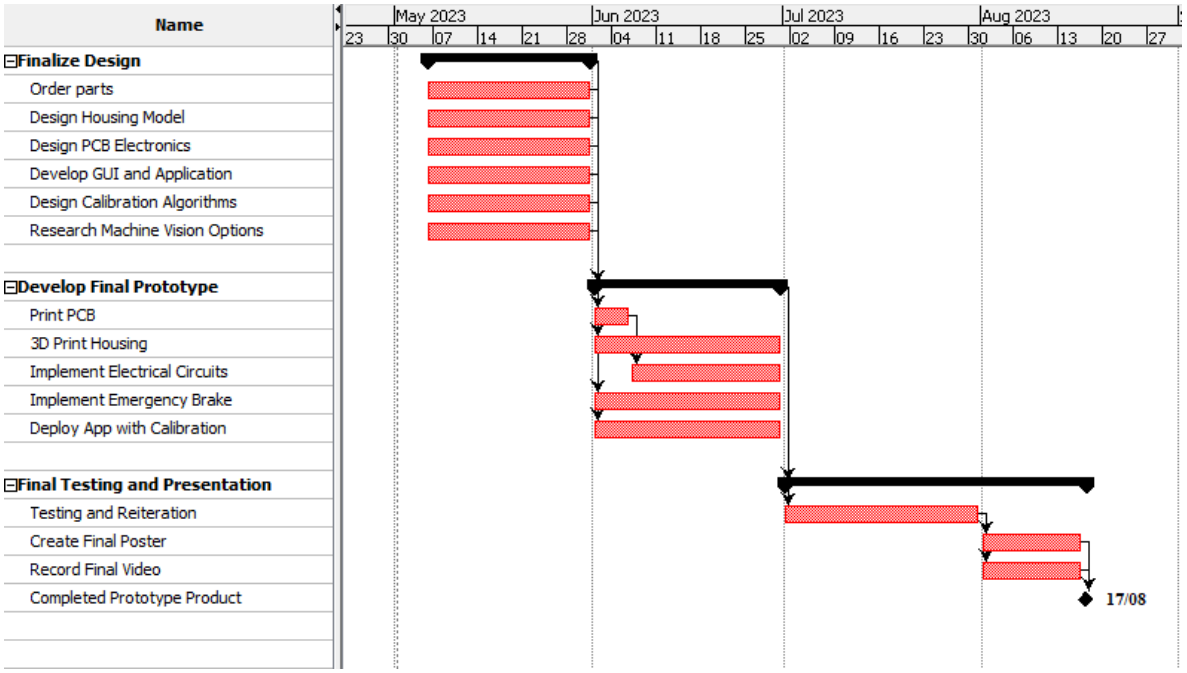

Figure 9: ADAScooter Gantt Chart for future development milestones from May through August.

7. Conclusion

In a world where micromobility devices (e-scooters, e-bikes, hoverboards, etc.) are quickly rising in popularity, the goal of ScootPilot is to help keep riders and nearby pedestrians safe on the road and alleviate the concerns of people and governments around the world with regards to the safety of these novel modes of transportation. With smart proximity detection, speed control, and an effective yet safe emergency braking system, ScootPilot will ensure a safe and smooth riding experience for even the most reckless users on the road. Coupled with an intuitive touch screen interface and a calibration system, the benefits of ScootPilot can be enjoyed by people of all different body types and skill levels. Based on the extremely fast growth of the e-scooter market and the lack of an existing solution, we believe that the ScootPilot will be the main option for scooter safety in North America and hope that working with distributors in the region to deploy our product will facilitate our growth as a company.

8. References

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