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Drone Based Mapping and Ground Based Robotic Precision Spray System for Field Crops

A Team Inventory

AUGUST 2025

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**Gil Rezin**

**Logan Sutton**

Faculty Mentor:

**Parteek Kumar**

Project Lead:

**Jordan Jobe**

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# Introduction

Dear Jordan Jobe,

Our team is ecstatic to meet with you and discuss the details of the coming AgAID project. This document provides an introduction to each of our team members, outlining training, skills, and relevant experience. I’m sure you will find that we are both highly skilled and motivated students towards the contents of this project, with significant experience in relevant fields. We want to thank you for the opportunity to contribute to such novel research, covering applied robotics, computer vision, and artificial intelligence. We can’t wait to work with you and the rest of the AgAID team!

Best Regards,

Gil Rezin, Logan Sutton



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**EDUCATION** **Washington State University, School of Electrical Engineering & Computer Science** - Pullman, WA **Expected May 2026** *Bachelor of Science in Computer Science, Minor in Mathematics* William H. Thompson Scholarship • Honors College • Dean’s List  
 **IES Abroad**, Granada, Spain, 2024 Summer Global Program  
  
 **TECHNICAL SKILLS** Java, C, C++, C#, Python, R, Unity, Visual Studio, Git  
  
 **WORK EXPERIENCE**

**Washington State University** | Undergraduate Researcher | Pullman, WA **May 2025 – Present** • Conducted research towards software tools to support analysis of coding design patterns  
  
 **Washington State University** | Undergraduate Departmental Tutor | Pullman, WA  **January 2025 – Present** • Provide individualized tutoring sessions to undergraduate students, focusing on core computer science subjects  
  
 **Washington State University** | Teaching Assistant | Pullman, WA **August – December 2024** • Led weekly 3-hour lab sessions and 2-hour office hours, reviewing C programming materials, guiding hands-on coding exercises, and providing one-on-one student instruction  
 • Evaluated and graded student assignments and exams, offering constructive feedback to enhance learning and performance

**PROJECTS**

**Generative Neighborhoods** • Created a proof-of-concept application that uses generative AI for city planning purposes by generating new GIS data  
 • Developed novel methods of generative AI usage via fine-tuning

**Generative AI Puzzle Framework for Dungeons & Dragons** • Created a web application that utilizes generative AI to analyze player traits and progress, creating unique, tailored puzzles.

**Walking Corridor Identification for City Planning**

• Designed and implemented an R-based script to analyze urban areas for high walking potential

• Delivered actionable insights to city planners, enabling data-driven infrastructure investments and policy decisions to enhance urban walkability

**EDUCATION  
Washington State University, School of Electrical Engineering & Computer Science** - Pullman, WA **Expected May 2026** *Bachelor of Science in Computer Science*  
**Washington State University, College of Arts and Sciences** - Pullman, WA **Expected May 2026** *Bachelor of Science in Applied Mathematics*  
**TECHNICAL SKILLS**C, C++, C#, Python, JavaScript, OOP, Fastify, Git, Railway  
**WORK EXPERIENCE  
Software Engineering Intern –** Schweitzer Engineering LaboratoriesAugust 2025 - present  
 • Leveraged Python and lxml library to parse and aggregate KICT data for pipelined report automation **Software Engineering Intern** – Monetic (part-time) May 2025 – August 2025  
 • Utilized JS and React Native to create an optimized KYC flow reducing average user submission time by 25%  
 • Leveraged Fastify requests with Bridge API to develop backend logic lowering user validation RTT by 70%  
• Developed Postgres-based automation for KYC submission handling and compliance tracking  
• Implemented custom regex patterns for real-time input validation allowing immediate input feedback  
**Fortnite Creative Map Creator** – Freelance Mar 2022 – May 2025  
• Utilized Fortnite’s Unreal Editor and Verse language creating islands amassing over 15 million total plays  
• Programmed various Verse scripts to optimize device interactions reducing island memory by 40%  
• Continuously used end-user feedback to implement new game features resulting in 30% daily user retention  
• Performed regression, unit, stress, and end-to-end testing to ensure correct experience functionality  
• Actively used Unreal Revision Control to manage projects and improve team collaboration  
**PROJECTS**  
**Procedural World (**[**GitHub**](https://github.com/LoganSutton13/procedural-generation-demo.git)**)** *Python, Pygame, PyInstaller* August 2025 - present  
 • Leveraged Python to generate random world environments with seed input allowing for reproducibility  
 • Utilized 4 Perlin Noise maps with varying octaves and a 0.5 exponential decay for height map creation  
 • Built real-time visualization with Pygame allowing for user seed input or random seed generation  
 • Packaged demo using PyInstaller into a standalone executable for easy sharing and feedback  
**Blueberry Bot (**[**GitHub**](https://github.com/LoganSutton13/discord-bot.git)**)** *Python, Railway, Discord.py* July 2025 - present  
 • Developed a Python based Discord bot supporting async slash commands and dynamic responses  
 • Deployed bot using Railway with a pipelined CI/CD workflow including staging and production branches  
 • Integrated Requests library and Fortnite API to fetch and display real-time map data and usage metrics  
 • Implemented per-user rate limiting using Time library with global error handling for robust commands