

Team Inventory

September 19, 2025

For **SanDisk**

Faculty Mentor: Ogonna Eli

Team Members: Xavier Graham, Fermin Valenzuela, Brody England, Isaac Schwarz

Overview

The purpose of this document is to introduce the team and provide an overview of the team's skills, background, and experience. This document serves as a reference to support effective task assignments and project planning.



Isaac Schwarz

EDUCATION

Bachelors of Computer Science, BSCS May 2026 Northern Arizona University - GPA: 3.89 Flagstaff, AZ Relevant Course Work: Data Structures, Principles of Languages, Linear Algebra. **Dual Credit Enrollment** May 2023 Pima Community College - GPA: 4.00 Tucson, AZ Relevant Course Work: Programming. Data Structures, Object Oriented **High School Diploma** May 2023 Homeschool - GPA: 4.00 Tucson, AZ

PROJECTS

Vi | Rust **2025**

- Built a VI text editor clone in rust.
- Gap Buffer implementation for efficient text manipulation.
- Compiles to web assembly to be used on the web.

NYTRPG | Golang, Typescript, SQLite

2025

- Built a web based real time RPG involving New York Times games.
- Implemented concurrent Websocket connections to handle real time gameplay features.
- Implemented a REST API in Golang to handle user authentication and various other features.

TECHNICAL SKILLS

Languages: C, Javascript/Typescript, Golang, Python, C++, Rust, Java, SQL UI Frameworks: HTML, React

Databases: MySQL, SQLite, MongoDB **Operating Systems:** MacOS, Linux, Windows

Software: Git, Neovim, VS Code **General:** Zsh, Bash, Make



Brody England

EDUCATION

Bachelors of Computer Science, BSCS

May 2026

Northern Arizona University - GPA: 3.51

Relevant Course Work: Data Structures, Operating Systems, Principles of Languages, Linear Algebra. **High School Diploma**Benson High School - GPA: 3.92

Benson, AZ

WORK EXPERIENCE

Research Intern Jan. 2025 - Present

Northern Arizona University (CSIL / FEWSION)

Flagstaff, AZ

- Built a satellite-image model that helps estimate how important each border crossing is to the supply chain; set up a clean training process and reached 82% test accuracy.
- Co-built HAWT, an open-source USGS package that supports water conservation work, used to build Neo4j graph networks of 1,000+ river basins.
- Improved solve time of commodity flows between country pairs by 53% with parallelism and improved methods of solving (QP, LP, and Hybrid).

Robotics and Machine Learning Research Intern

Jun. 2025 - Aug. 2025

Griffiss Institute / AFRL Rome Lab

Rome, NY

- Developed a neuromorphic avoidance model for a robot, measured by a 68% lift vs. baseline, by training an associative-learning neural network with physical stimuli (color and vertical acceleration).
- Reduced collisions by 75%+, measured across simulation and hardware trials, by iterating in Gazebo, transferring the learned policy to the robot, and closing the loop with on-board sensing.
- Validated a successful system, measured by repeatable KPIs (collision rate, path efficiency) by building a clean evaluation workflow with ROS telemetry logging and trajectory visualizations.

PROJECTS

Live Game Campaign Tracker | Python, TypeScript, SQL

2025

- Built a live web application that tracks progress on 261 Helldivers II (live service game) planets and refreshes every 45 seconds.
- Kept stable and public for 1,300+ visitors with a containerized, secure setup to allow for proper planning of future events and in-game planning.

Explainable Autonomy Kit | Python, TypeScript, SQL, Numpy, FastAPI

2025

- Built a robotics planner that computes routes and a "Why?" breakdown across time, risk, energy, uncertainty, memory, with interactive counterfactual re-planning via sliders and overlaid paths.
- Made a full-stack demo to allow for robotics project planning/understanding of choices/factors

TECHNICAL SKILLS

Languages: Python, Rust, C/C++, JavaScript/TypeScript, SQL, Bash **Frameworks/Libraries:** Flask, React, Tailwind, PyTorch, TensorFlow, OpenCV, Numpy, FastAPI **Skill Level:** Proficient in all listed. Skills were obtained through work experiences and personal projects

Interests: Snowboarding, Hiking, Playing Videogames, Spending time with friends and family.



FERMIN VALENZUELA

+1(520)-233-8977 | Ferminvalenzuela300@gmail.com | Phoenix, AZ

Summary

Fresh and ambitious Computer Science student that has an interest in completing projects and tasks at a fast pace. Completed plenty of certifications to focus on becoming well-rounded in various aspects of software development and emerging technologies. To add, I have participated in different internships and bootcamps to refine both my technical expertise and corporate skills, increasing my ability to collaborate effectively in professional settings. I have personally worked hands-on in projects using C, Python. While being certified in JavaScript, using React.js. I have used my experience in real-time data processing, API implementation, and software architecture. Strong foundation in computer systems, debugging, and optimization fundamentals. Looking to grow my career in tech.

Skills

JavaScript, Python, C/C++, Data Analysis, React.js, GitHub, API Integration, Collaboration, Time Management, Project Management, Computer literacy, Time Management, Customer Service, Algorithm Design, Unit Testing, Cloud Computing, Linux

Experience

PM Accelerator | Miami, FL Software Engineer | 08/2024 - 12/2024

Accomplishments:

• Produced 6 User Interface components for a facial recognition app • Collaborated with a team of 10 developers and 2 product managers to integrate UI and AI function features inside of Argyle Application. • Designed responsive, accessible web pages using HTML, CSS, and JavaScript. • Primarily Focused on functionality • Unit Testing to optimize and debug interfaces for performance. • Provided UX research insights and feedback in team meetings. • Collaborated using GitHub version control, Slack and Agile methodologies

Global Career Accelerator: Data Analytics

HTML & CSS & Javascript Trainee | 05/2024 - 08/2024

Accomplishments:

• Created dynamic websites and apps using HTML, CSS, Bootstrap, and JavaScript. • Gained enhanced experience in debugging existing coding projects. • Utilized developer documentation to improve features. • Conducted UX research and prototyped digital products. • Collaborated with a global team to meet technical project goals.

Projects

Argyle Platform Project

Designed a platform using React.js, TypeScript, and Balsamiq with distinct user flows for businesses and consumers. Developed a landing page enabling consumer logins and business onboarding, leading to a feature-rich business dashboard.

Integrated tools like data request management, status tracking, and metrics visualization to enhance business operations.

Used GitHub for version control and collaborated on Agile-based projects, ensuring efficient team workflows. Focused on scalability, maintainability, and clean design to provide a seamless user experience.

Weather App Project

Built a weather app project with JavaScript, HTML, and CSS, fetching weather data via a public API. Displayed weather details like temperature, humidity, and wind speed with a responsive, user-friendly interface. Showcased expertise in API integration and DOM manipulation for a fast and dynamic user experience. GitHub Repository: github.com/ProjectsByFerm/ProjectsbyFerm.github.io

Certificates

Artificial Intelligence Certified - PM Accelerator, Software Engineering Certified - Leland, Web Development Certified - GLOBAL HQ, JavaScript Certified - GLOBAL HQ, Html + CSS Certified - GLOBAL HQ, Intercultural Skills Certified - GLOBAL HQ

Education

Northern Arizona University | Flagstaff, AZ Computer Science | 05/2026 Currently completing courses in computer science, Algorithms, Data structures, Calculus 2 Software engineering, Linux, Azure, Python, C Maricopa Highschool | Maricopa, AZ 05/2022 Principal List Pos. 26 4.2GPA, Varsity Wrestling & Swim



Xavier Graham

Education

Bachelors of Software Engineering, BSSE

May 2026

Northern Arizona University

Relevant Course Work: Data Structures, Operating Systems, Principles of Languages

High School Diploma May 2022

Alaska Middle College / West Anchorage High School

Work Experience

Software Development Intern, Piper Sandler

June 2025 - August 2025

Collaborated with a team to design, build, and maintain internal software used daily by bankers and managers. Developed scalable, efficient backends using .NET, and built dynamic, responsive frontends with React to ensure a smooth user experience.

- .NET Framework
- React
- Typescript
- Version Control (Git, DevOps)

Information Security Services Student Worker, Northern Arizona University

January 2025 - Present

As a member of the Information security team I play a key role in ensuring the security and integrity of our systems and data. I created scripts to automate security and access functions to manage users access to certain systems within Northern Arizona University.

- PowerShell/Python scripting
- Documentation
- Quality Assurance
- Cybersecurity

Skills

Python, C/C++, C#, .NET, HTML & CSS, JavaScript, React JS, Typescript, Node.js, PostgreSQL, SQLite, Microsoft SQL Server, Rust, Lua, Linux, Windows, macOS