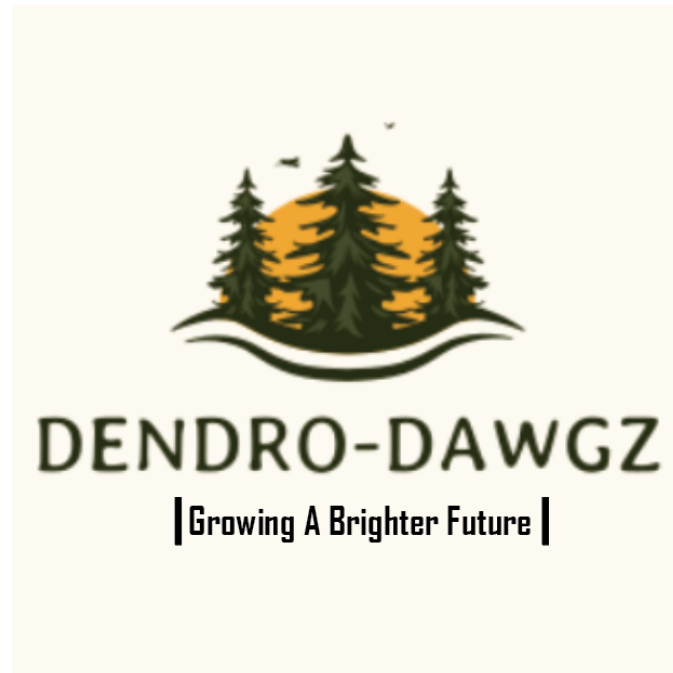# - Team Inventory -

September 18, 2023

- **Team Members** -
Nile Roth
Niklas Kariniemi
Zachariah Derrick
Asa Henry

- **Sponsored by** -
Prof. Andrew Richardson, SICCS/ECOSS
Prof. Mariah Carbone, ECOSS
Prof. George Kock, ECOSS
Austin Simonpietri, ECOSS

- **Team Mentor** -
Italo Santos

Asa Henry
BS Computer Science
Flagstaff, Arizona

EDUCATION
Metro Tech High School (2016 - 2020)
Northern Arizona University (2020 - Present)
- **Courses:** CS 485 Undergraduate Research, CS 460 Computer Networks

WORK EXPERIENCE
Computational Scientist: *LadnerLab*
- Maintained and extended functionality of PepSIRF to improve performance, make more user-friendly, and add new capabilities; included improving readability of source code
- Implementing q2-PSEA plugin for Qiime2
- Knowledge of plotting/data visualization software (altair and altair_saver)

SKILLS
GitHub - I have been using GitHub and the cli application Git for ~5 years to store and manage the development of class and personal projects, and I have needed to expand my knowledge to be more effective at developing for LadnerLab
Code Styling/Structuring - Programming for ~6 years, I have developed my own coding style and structure which leans on verbosity and explicitness to effectively communicate what is trying to be accomplished and the pieces which are involved
Programming languages - Rust, Python, C, and C++

OTHER INTERESTS
- Free and Open Source Software (FOSS)
- Food Justice
- Game Development
- Systems Programming

Zachariah Derrick
BS Computer Science
Flagstaff, Arizona

EDUCATION
<u>Northern Arizona University</u> (2020 - Present)
- **Courses:** Honors Fieldwork Capstone, Software Engineering, Operating Systems, Computer Networks, Artificial Intelligence, Database Systems, Computer Graphics

WORK EXPERIENCE
<u>Software Development Engineer Intern</u>: *Amazon*   **May 2023 - August 2023**
- Led and owned a full-stack development project from concept to production, overseeing rigorous design, architecture, frontend and backend development, and deployment through automated pipelines.

<u>Software Engineer / Infrastructure Analyst - Intern</u>: *State Farm*   **May 2021 - August 2022**
- Eliminated grueling manual process for both our team and clients by leading development of a REST API Proof of Concept that allowed our team and end users to write automated scripts for extremely secure and high-importance business transactions.

<u>Freelance Developer</u>: *QuikUnit - Android App*   **January 2022 - May 2022**
- Developed mobile application that is currently on the app store by working closely with a client to determine their overall goal and vision for their patented mobile application.

SKILLS
<u>AWS and REST APIs</u> - Greatly improved scalability, reliability, and disaster recovery of an enterprise product by migrating an entire State Farm application to AWS. Developed several complex APIs on an existing service to improve the customer experience on Amazon.com.
<u>Machine Learning, Image Processing, and Mobile Development</u> - Developed an Android application for a client as a freelance developer, which uses machine learning to read in units through a live phone camera, convert them to different units, and display them over the original numbers in real time.
<u>UI development</u> - Added UI to admin tools with Amazon that called my backend APIs to generate a table with data regarding Amazon Sellers. Added UI and automation software at State Farm that sends 1000s of personalized emails to unique server owners at the push of a button.

OTHER INTERESTS
- I love playing/listening to all types of music, whether it is trumpet in NAU's top jazz band and around the city, or guitar/bass/drums with friends.
- I am a huge outdoors lover, and I enjoy hiking, backpacking, camping, and skiing.

Nile Roth
BS Computer Science
Flagstaff, Arizona

EDUCATION
Salpointe Catholic High School (2016 - 2020)

Northern Arizona University (2020 - Present)
- **Applicable Courses (current & finished):** Database systems, Software engineering, Parallel programming, Operating systems, Algorithms.

SKILLS
Query Development -
Interacting through insertion, collection, and deletion of data with database systems.

Debugging -
Analyzing and discovering issues that are not found by compilers.

Code Styling/Structuring -
Programming for ~4 years I have learned how to write structural code with high readability and understandability. I use lots of comments to ensure myself and other viewers know exactly what is being done at any given line of code.

Programming languages -
C, C++, Python, SQL

OTHER INTERESTS
- Environmental sustainability
- Agriculture
- Forestry
- Snowboarding

Niklas Kariniemi
BS Computer Science
Flagstaff, Arizona

EDUCATION

Horizon High School (2016 - 2020)
Northern Arizona University (2020 - Present)
- **Courses:** Operating Systems, Artificial Intelligence, Parallel Programming, Algorithms, Virtual Worlds, Database Systems, Software Engineering, Web Programming 1 & 2

WORK EXPERIENCE

Web Developer & GSuite: *Zigmens*   **January 2017 - Present**
- Designed and implemented websites that met the needs of clients
- Created time and task trackers using Google Sheets as a database. This was also done with the help of Google Apps Script which I used to create the code behind the systems.

SKILLS

Web and Mobile App Development - I have experience in React and React Native from working on personal projects. I also have experience using Bootstrap to create websites for clients throughout the years. For React, I have created multiple different projects, like a travel journal website. Which allows you to create journals for places you have traveled to. For React Native, I have created an app that allows you to input location and it will show nearby restaurants.

Databases - Have developed multiple software applications that used different kinds of databases. This ranges from Google Sheets all the way to using SQL.

REST APIs - Developed software projects that used APIs like Google Maps and Places to allow the use of Google Maps within an app.

Programming languages -
C, JavaScript, Python, SQL

OTHER INTERESTS

- I love all sports in general. Especially love watching F1, Hockey, Football, Soccer, and Golf. I also enjoy playing any sports with my friends
- I also enjoy playing video games in my free time.
- Spending time outdoors is also always fun for me.