Team Inventory

ALEX GROCE, ASSOCIATE PROFESSOR, SICCS
JOSHUA JOHNSON   ZANE FINK   SILU SHEN   TRISTAN MILLER
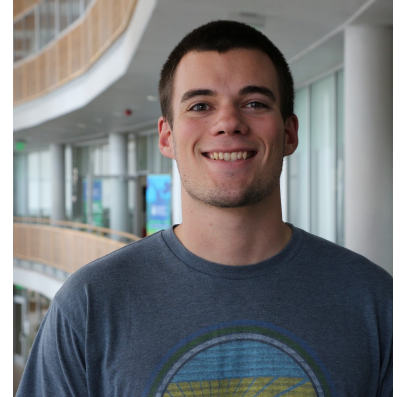MENTORED BY FABIO SANTOS

Overview

The objective of this document is to briefly introduce the members of the team. It reviews the education, training, skills, relevant experience, and interests of each team member to provide a brief overview of important team facts.

Zane Fink

zwf5@nau.edu

Major: *Computer Science*
Hometown: *Surprise, AZ*

Education:
- Shadow Ridge Highschool (GPA 3.7)
- Northern Arizona University

Relevant courses include
- **CS480** *Operating Systems*
- **CS386** *Software Engineering*
- **CS421** *Algorithms*

Work Experience
- ☐ **Undergraduate Research Assistant - The Pathogen and Microbiome Institute** March 2018-Present
  - Designed and implemented algorithms for the design of an oligonucleotide assay that spans viruses known to infect humans. This assay was used to probe for antiviral antibodies in blood to comprehensively determine an individual's viral exposure history.
  - Created command-line open-source software packages complete with complete documentation.
  - Wrote comprehensive unit tests to ensure software reliability.

Skills
- **Software Design**: Through my work and various projects I have gained experience designing open-source command-line software packages.
- **Programming Language Proficiencies**: Through classwork and job experience I have developed a proficiency in C, C++, CUDA, Java, and Python.
- **Data Analysis**: With the massive datasets generated by next-generation sequencing comes the need to perform many different analyses required to obtain a complete picture of the data. I have used matplotlib, scipy, numpy, and pandas for this purpose.

Personal Interests
- **Mountain Biking -** I enjoy riding the trails in Flagstaff and the surrounding area.
- **Hiking -** There are some places your bike cannot go. These are the places I like to hike.

Silu Shen

aa4239@nau.edu
Major: *Computer Science*
Hometown: *China*

Education
- Xianyang Caihong High School
- Xi'an University of Posts and Telecommunications *(BSCS seeking)*
- Northern Arizona University

Relevant courses include
- **CS480** *Operating Systems*
- **CS399** *Mobile Application Development*
- **CS386** *Software Engineering*
- **CS421** *Algorithms*

Work Experience
- ❏ **Mobile Application Development Lab** March 2017-May 2018
  - Learn IOS application development and production of Friends software, Weather forecast software, Music software UI, News software, and so on.

Skills
- **Software Design**: Developed software for IOS and Android platforms.
- **Programming Languages**: Extensive experience studying Java and C languages.
- **Linux operating system**: Proficiency in Linux operating systems through use at development lab and in classes.

Personal Interests
- **Singing -** I am very interested in music. Learned the guzheng.
- **Dancing -** I have been learning dance for 7 years. Among them, I have studied Latin dance for 5 years.
- **Painting-** I have studied sketches and watercolors.

Tristan Miller

tem83@nau.edu

Major: *Computer Science*

Hometown: *Gilbert, AZ*

Education

- Gilbert High School
- Northern Arizona University *(BSCS seeking)*

Relevant Coursework

- **CS386** *Software Engineering*
  This class has taught me how to effectively develop in a team environment
- **CS480** *Operation Systems*
  This is the class that really cemented my programming knowledge as it applied the techniques and fundamentals we had learned previously

Skills

- **Linux and Unix Proficiency**
  General linux tinkering for approximately 5 years, running personal servers as well as using a Linux environment on a daily basis.
- **Object Oriented Programming**
  OOP is my comfort zone, most of my personal projects have been developed using OOP languages, and it is one of the first taught at the university.
- **Problem Solving**
  Even from a young age, I was always looking for ways to solve problems, whether it be Rubik's cubes, or programming projects. The challenge itself is exciting and I'd rather shoot for the stars and miss than aim low and hit.

Personal Interests

- **Snowboarding** - There is nothing that feels more "free" than snowboarding. It only takes a few days to learn how to do it, however it is very difficult to master.
- **Gaming** - Most people these days would say they like video games. Video games have inspired me to take on this passion as a CS student, and can sometimes be a fun distraction.
- **Astronomy/Aerospace** - Anything space is deeply fascinating, learning about things that are an unfathomable distance away and at time frames an order of magnitude greater than the human lifespan.

Joshua Johnson

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Major: *Computer Science*
Minor: *Mathematics*
Hometown: *Tucson, AZ*

Education
- Primavera Online High School *(GPA 3.73)*
- Northern Arizona University *(BSCS seeking)*

Relevant Coursework

- **CS386** *Software Engineering*
- **CS480** *Operation Systems*

Work Experience
- ❏ **Raytheon Company** Summer 2018, 2019
  - Contributed to unit and integration testing efforts for two major product lines. Responsible for writing and fixing test scenarios, operating testing simulations, and manually analyzing flight testing results critical to program deadlines and DOD requirements.
  - Assisted in creating software to help model and convert XML based requirement tests to a more usable, visual based form.
- ❏ **MISTE Birdsong Identification Research** January 2019 ~ Present
  - Assisted with development, testing, and requirements gathering for MISTE research project.

Skills
- **C, C++, MATLAB Language Skills**
  Utilized C, MATLAB, and C++ on a daily basis at internships to analyze, fix, and test project code.

- **Experience with Google Test**
  Wrote Google Test scripts at internship in 2019 to test critical requirements not verifiable on preexisting C and MATLAB frameworks.

- **Linux and Unix Proficiency**
  Performed daily work on Linux and Unix systems exclusively at 2019 internship.

Personal Interests: Cycling, guitar, musicals, classical singing, writing, language learning