MapONE

Team Inventory

September 27, 2021

Sponsors:
Planetary Geologic Mapping Program, USGS Astrogeology Science Center
Dr. Sarah Black, Research Physical Scientist
Marc Hunter, IT Specialist

Faculty Mentor:
Melissa D. Rose

Team Members:
Samantha Milligan
Michael Nelson
Ricardo McCrary
Jacob Stuck

Overview: The purpose of the team inventory document is to briefly introduce the members of our team. The following pages briefly outline the training, skills, and relevant experience of each team member.

Samantha Milligan

Email: smm885@nau.edu
Hometown: Flagstaff, AZ

Education
- **Institution:** Northern Arizona University
- **Degree:** BS Computer Science, Minor in Mathematics
- **Current GPA**: 3.7
- **High School:** Northland Preparatory Academy (GPA 4.0)

Relevant Courses
- Database Systems
- Artificial Intelligence
- Web Programming

Work Experience
- **Technical Intern, Northrop Grumman:** Automate data collection methods to capture monthly division engineering metrics and program ratings.
- **Software Engineer Intern, Abstract:** Developed Application Programming Interfaces (APIs) using open source web development software.
- **Student Extern, SEAKR Engineering**: Gained field insight into everyday engineering technical and professional practices.
- **Alumni Assistant, Northern Arizona University:** Maintained professional relationships with alumni, donors, and university affiliates.

Technical Skills
- **Programming Languages:** Python, Java, C, R, SQL, JavaScript, HTML, CSS, VBA
- **Backend/Web Development:** Proficient in Django and Django REST Framework. Experienced in developing and optimizing APIs.
- **Agile/Scrum Methodologies:** Industry knowledge and experience in managing engineering teams as a Scrum master.

Interests
- **Cybersecurity:** Implementing secure systems prevents cyberattacks, improves programming skills, and promotes data security.
- **Aerospace:** Flight and space exploration are key areas for technological advancement.
- **Mathematics:** Problem-solving and data analysis are major components of algorithm development.

Ricardo McCrary

Email: rm842@nau.edu
Hometown: Prescott Valley, AZ

Education
- **Institution:** Northern Arizona University
- **Degree:** BS Computer Science, Minor in Japanese
- **Current GPA**: 3.4
- **High School:** Grand Canyon High School (GPA 3.8)

Relevant Courses
- Computer Networks
- Network Security
- Advanced Web Development

Work Experience
- **Job Title, PC SImplicity:** Developed business computer networks, consulted with clients on website development, and managed costs.
- **Teaching Assistant, Northern Arizona University:** Mentor undergraduate students in introductory Japanese classes.

Technical Skills
- **Programming Languages:** Python, C, Java, JavaScript, HTML, CSS, PHP
- **GUI Development:** Designed web pages to interact with a small database using buttons, slides, textboxes. Linked web pages through hyperlinks hidden behind buttons.
- **Secondary Language:** Proficient in Japanese up to non-business level conversation.

Interests
- **Travel:** Learning new languages and cultures. Plans to visit Japan, Korea, Germany, Italy
- **Artificial Intelligence (AI):** enhance exploration of other planets, improve working conditions and everyday assistance.
- **Game Development:** the interaction between models and code and getting rudimentary AI to react to specific situations inside the game.

Jake Stuck

Email: jps364@nau.edu
Hometown: Scottsdale, Arizona

Education
- **Institution:** Northern Arizona University
- **Degree:** B.S Applied Computer Science
- **Current GPA**: 3.3
- **High School:** Saguaro High School (GPA 3.4)
- **Vocational Training/Certifications:** East Valley Institute of Technology
    - Cisco Networking Academy Program (GPA 4.0)
    - Certificate of Arizona Technical Skills Standards in Network Technologies

Relevant Courses
- Artificial Intelligence
- Distributed Systems
- Mobile Application Development

Work Experience
- **Student Technician, NAU Student Technology Center, Information Technology Services:** Performed technical support on a plethora of devices and software, monitored and managed 802.11 wireless interference within NAU's residence halls, performed data backups to secure NAU servers utilizing the terminal, and assisted ITS's IOT team in setting temperature checking stations and sensors around campus during the COVID-19 pandemic.
- **Data Structures Teaching Assistant, NAU School Of Informatics, Computing, and Cyber Systems:** Graded and analyzed student projects weekly as well as provided support to students as needed, and assisted in the proctoring and grading of exams.

Technical Skills
- Ability to be language agnostic and adapt to any language that best fits the problem.
- **Programming Languages:** C, Java, C#, Python, Dart
- **Frameworks/Tools:** Skilled in Flutter (Dart), data science (Python), NumPy (Python), Swing (Java), JavaFX (Java), GameMaker (ActionScript), Jupyter Notebook (data science visualization), and the Linux terminal.
- **IPV4 IP Addressing:** I can manually set up IP addressing schemes as well as subnet them.

- **Object Orientated Programming:** I am proficient in utilizing the mechanics of OOP to my advantage. E.g polymorphism, encapsulation, abstraction, and inheritance

Interests
- **Artificial Intelligence:** Curiosity in the algorithms behind AI and how it can recognize certain behaviors in some contexts.
- **Environment:** Concern for where the Earth's environment is headed and an interest in how software solutions can address the climate crisis.
- **Computer Networks**: Appreciation for networks and curiosity for wireless technology.

Michael Nelson

Email: mbn35@nau.edu
Hometown: Mesa, AZ

Education
- **Institution:** Northern Arizona University
- **Degree:** BS Applied Computer Science
- **Current GPA**: 3.6
- **High School:** Highland High School (GPA 3.9)

Relevant Courses
- Web Programming
- Software Engineering
- Artificial Intelligence

Work Experience
- **Amazon Affiliate, Amazon Marketing Program:** Produced content to a remote live-streaming web service, utilized developer tools to program chat moderation bots using APIs and built-in commands.
- **Developer, Spyrates Email Service:** Developed an application that sends emails containing random roles and tasks for players within the game "Sea of Thieves".

Technical Skills
- **Programming Languages:** Python, Java, C, C++, MATLAB, JavaScript, HTML, CSS
- **Frontend/Web Development:** Designed the interface for the software engineering project "EasyCart" using the box model and various CSS styling methods.
- **Informatics/Data Analysis:** Used Python and Jupyter Notebook to parse data, analyze trends, and transfer information within documents into organized tables.

Interests
- **Artificial Intelligence:** Explore machine learning and understand how to iterate through large amounts of data efficiently.
- **Game Design:** General level design and development of AI that learns how to interact with the surrounding environment.
- **Virtual Reality:** Design virtual reality applications and understand the components necessary to make a 3D environment.