

User System of Astrogeology Technologies
(USAT)



Team Inventory

CS486C Senior Capstone Project

Mikal Ustad, Kyle Andrew McGinn, Zack Ellett, Megan Backus

1/25/2012

This document introduces: the team members and their assigned roles, task assignments, special talent deficiencies as a team, and what we will do if there is a deficiency. Each person provided a Team Member Profile to summarize qualifications. The goal is to make sure we have a well-matched team with the necessary skills to tackle the project. Resumes will be attached to an e-mail or if in hardcopy, a separate piece of paper.

Kyle Andrew McGinn (Leader, Communicator)

This is my fifth year at NAU and my set graduation schedule is for May of 2013 with a Bachelors in Computer Science with minor in Mathematics. Born and raised in Tucson, Arizona. I have over 6 years of combined IT experience. My current occupation is a Computer Clerk at USGS. My main hobbies are: learning new programming languages, creating personal software programs, being a car/computer enthusiast, and an avid outdoors-man. I am engaged and soon to be married in July of 2012. In the same year, I will be welcoming into the world my baby girl in May of 2012.

Relevant Skills:

- Proficient in the administration of all Windows OS's including Server, with average to moderate knowledge of the Mac OS through Security Technical Implementation Guides(STIG) and Unix systems through setting up a file-server a long time ago in Ubuntu.
- My experience with the logical flow and "feel" of GUI's comes from a background in personal and academic computer game development. The placement of windows, popups, information, and buttons are crucial to the efficiency of the program and ease of use.
- Beginner-Average experience in Photoshop; basic understanding of filters and layers.
- Beginning experience with Envi.
- I am great at finding solutions to problems, even if the subject matter is not in my forte.
- Agile: quick to learn new languages and systems.
- Proficient mainly in C/C++, Java, HTML, SQL, Oracle

Relevant Interests:

When I was researching into ISIS 3.0 error checking and I/O handling, I came across information about ISIS2. The same process in ISIS 3.0 took 230 more lines of code in ISIS2. ISIS3 is gigantic, therefore having a GUI would increase the human aspect of productivity and speed of processing. I love cleaning up computers to make them faster and more efficient. Therefore, the development of this GUI gives me great motivation to see the final product.

Relevant Course Work:

- CS315 – Automata Theory
- CS345 – Principles of Database Systems
- CS386 – Software Engineering
- CS396 – Principles of Languages
- CS413 – Virtual Worlds
- CS460 – Computer Networks (in progress)
- CS480 – Operating Systems
- CS499 – Game Production
- MAT362 – Numerical Analysis

Mikal Ustad (Recorder)

I am currently in my fourth and final year here at NAU. I hope to graduate with a Bachelor's of Science degree in computer science this May. I grew up in Vermillion, South Dakota. I currently work as a lab aid for the lower level computer science labs, and before that I held a student IT position for the Department of Residence Life here at NAU. In my free time I enjoy messing with different hardware configurations in my machines. I have worked mostly with Windows systems, but I have recently been gaining some UNIX experience by working with a homemade Ubuntu server.

Relevant Skills:

- I am proficient in Java, Python, C/C++, C#, Windows operating systems, and Windows applications.
- I have experience with Matlab, Web development HTML/PHP/CSS/JavaScript, MySQL, Microsoft SQL Server, and UNIX operating systems.

Relevant Course Work:

- CS 315 – Automata Theory
- CS 345 – Principals of Database Systems
- CS 386 – Software Engineering
- CS 396 – Principals of Languages
- CS 399 – Projects in Bioinformatics (in progress)
- CS 413 – Virtual Worlds
- CS 421 – Algorithms
- CS 460 – Computer Networks (in progress)
- CS 477 – Advanced User Interfaces (in progress)
- CS 480 – Operating Systems
- CS 499 – Distributed Systems
- MAT 316 – Linear Algebra

Zack Ellett (Webmaster, Facilitator)

I am originally from Tucson but have been attending NAU for the past three years. I am pursuing a Bachelor's Degree in Computer Science and also possibly minors in Mathematics and Physics. I work at the NAU Student Technology Center, providing technical support and computer repair for the students at NAU. I also work at the NAU Transportation Service Center Garage, maintaining the fleet of state vehicles in use at NAU. Outside of school, I am an enthusiast of all things computer and car related. I also enjoy cycling and digital audio production. I am very much looking forward to working on this project, both with my fellow teammates and our clients and friends at the USGS.

Relevant Skills:

- Proficient in many aspects of computer systems and Unix systems in particular: networking, system administration, software development, hardware
- Experience programming in C, Java, MatLab, Python
- Familiar with the capabilities of ENVI, GIS, IDL, Mathematica
- Additional experience in web development: HTML/CSS/JavaScript, website design
- Problem solving

Relevant Interests:

Unix/Linux systems - I have designed and built many Unix systems, both for my own use and for work settings. I am currently in the process of designing a Beowulf cluster using several PowerMac G5s running PPC Debian for use as a backup server at my job at the STC. I also built and maintain several systems of my own for various purposes.

Scientific computing - I am quite interested in many of the current applications of the ISIS system as well as other scientific applications of computing, including bioinformatics and tomography. And I am very interested to learn more about the imaging and spectroscopy that goes on at the USGS Astrogeology Program.

Relevant Coursework:

- CS460 - Computer Networks
- CS477 - Advanced User Interfaces
- CS480 - Operating Systems
- CS499 - Computer Security
- MAT362 - Numerical Analysis
- PHY263 - Physics III
- PHY361 - Modern Physics (in progress)

Megan Backus (Primary Document Reviewer)

I spent my first year and a half at NAU dabbling in many different fields before deciding upon Computer Science, making this my fifth year here. I intend to graduate next fall with a Bachelors of Applied Computer Science with a minor in Studio Art. I was born and raised in Peoria, Arizona. I currently work part time at Staples in their EasyTech department as a sales associate, although I am working with my bosses to become certified to work on computers as well. My hobbies range from reading a good book, sketching, and exploring the internet. I also enjoy camping and hunting in the forest with my father.

Relevant Skills:

- Throughout my experience at NAU, I have used Java, C/C++, and Python. I've also programmed websites using HTML/CSS, Javascript, and SQL.
- I am most familiar with using Windows systems, however I am eager to learn Linux systems.
- I have always enjoyed programming GUIs, especially the design and creative aspects of implementing user interfaces.

Relevant Course Work:

- CS345 - Principles of Database Systems
- CS396 - Software Engineering
- CS413 - Virtual Worlds
- CS460 - Computer Networks (in progress)
- CS480 - Operating Systems

Preliminary Task Assignments

Everyone:

- ✓ Resumes Uploaded to Dropbox to prepare for Team Inventory.
- ✓ Background and interests, uploaded to Google Docs on "Team Guidelines"
- ✓ Study XML and learn the formatting style to understand the inner workings of ISIS XML code.
- ✓ Send Megan suggestions for requirement document templates.
- ✓ Send Zack profile information of your background for the USAT website and a picture(if comfortable)

Consistent Updates from Everyone:

- ✓ Update "Important Links and Information" when you find helpful information/links/documentation pertaining to the project.
- ✓ Update "Availability" when your meeting availability changes or the sponsors meeting availability changes.

Zack:

Initial website creation, following guidelines for deadline on 1/27/2012.

Kyle:

Find questions to ask the sponsor, which prepares the team for requirements document. E-mail sponsor for meeting time. Compile and analyze team profiles to find a team deficiency. Create a Team Inventory document that addresses the guidelines.

Mikal:

Create Team Standards document that addresses the guidelines provided to us.

Megan:

Create an outline for the requirements document.

Team Deficiency:

The only deficiency we can see is that we are not familiar with ISIS itself, and the XML files will help us understand ISIS better. The team does not have much experience with XML, however it is similar to HTML. We will research into XML so that we know the structure of the XML files within ISIS.

Everyone knows some form of the programming language C and is proficient in Java. We all have a strong interest in GUI design and Linux.