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### **EDUCATION**

Bachelor of Science

Double Major in Applied Computing & Environmental Studies

Allegheny College, Meadville, PA

expected 2016

# COMPUTER SKILLS

Proficient programming skills in Java, Python, and C.

Experience with Python-based technical computing environments such as IPython and Anaconda  $\,$ 

Experience with statistical analysis and visualization using tools such as numpy, pandas, scipy, and matplotlib.

Experience with test automation, including advanced technologies such as code coverage and mutation analysis.

Proficient with the use of  $T_EX/I_FX$  for document preparation.

Familiar with the use of software engineering tools including version control, automated build systems, and continuous integration.

## OTHER SKILLS

Knowledge of modern software engineering techniques and methodologies, with a focus on agile software development.

Strong knowledge of experimental design and research methods in the biological and environmental sciences.

Familiar with the use of geospatial technologies such as GIS, GPS, and remote sensing. Knowledge of and experience working with hydroponics and other soilless agriculture growing systems.

Familiarity with biofuels and other sustainable energy technologies.

## WORK EXPERIENCE

#### Aquaponics Technician

Winter Break 2013

Environmental Science Department, Alllegheny College, Meadville, PA

- Responsible for independently maintaining multiple decorative and production aquaponics systems.
- Performed maintenance tasks such as cleaning filters, feeding fish, and maintaining water levels.

## $Darkroom\ Technician$

2012-2013

Art Department, Allegheny College

- Responsible for preparing chemicals and maintaining a well-stocked darkroom, as well as ensuring workspace cleanliness.
- Assisted and instructed art students in the use of darkroom materials and techniques.

#### Computer Art Studio Technician

2012-2013

Art Department, Allegheny College

- Instructed other students in the use of computer art tools, such as drawing tablets, digital video cameras, and large-format printers.
- Instructed other students in the use of software such as Photoshop, Illustrator, and Final Cut.
- Diagnosed and repaired technical difficulties with studio equipment.

## PROJECTS AND RESEARCH

Filesystem Traversal Study

Ongoing (began Spring 2014)

CMPSC440, Computer Science Department, Allegheny College

- Independently organized a research project to collect and analyze filesystem data.
- Programmed data-collection tools in Python.
- Prepared an IPython notebook to analyze and visualize data.
- Encouraged other students to voluntarily contribute datasets.
- Project available at https://github.com/hawkw/traverse

## Knightingale Twitter Analysis System

Fall 2013

CMPSC290, Computer Science Department, Allegheny College

- Collaborated with other students to create an open-source software system to analyze Twitter account archive data.
- Responsible for programming analytics and visualization, input/output, and unit testing.
- Contributed a majority of Java code to the project.
- Practiced Agile software development techniques.
- Project available at https://github.com/TeamKnightengale/Knightingale

### Switchgrass Biofuel Study

Spring 2013

ENVSC210, Environmental Science Department, Allegheny College

- Participated in an ongoing study to assess the viability of switchgrass pellets as a biofuel and industrial adsorbent.
- Contributed to experimental design, implementation, and data analysis
- Presented findings to interested local business groups