

# ALEX DAY

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## EDUCATION

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### Clarion University of Pennsylvania

B.S in Computer Science, Minor in Chemistry *GPA: 3.4/4.0*

Clarion, PA

September 2016 - December 2019

## EXPERIENCE

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### University of Arizona

*CAT Vehicle Research Assistant (REU)*

Tucson, Arizona

May 2019 - August 2019

- Worked within a team to develop a simple way to create autonomous vehicle paths with WebGME for use in a 4th grade curriculum
- Authored a paper entitled "Verification and Creation of Autonomous Vehicle Trajectories for Non-Experts with Reactive Design-Time Feedback and Sensor-Based Response"
- Developed a verification server in Flask that performed reachability analysis on a given path
- Prepared and presented research at the UROC conference at the University of Arizona
- Extensively tested the project in both simulation and on the Cognitive and Autonomous Test (CAT) Vehicle

### Komatsu Mining Ltd.

*Student Engineer*

Franklin, PA

May 2018 - August 2018 and December 2018 - January 2019

- Created a logging management tool in C# to be used on all Komatsu Mining equipment
- Created data analysis tools in Excel VBA and Python to assist with debugging of all mining machines
- Developed time saving scripts in Python to automate directory diff-ing and code header comment changing

### Clarion University Library

*Lab Manager*

Clarion, PA

Feb 2018 - Present

- Created multiple scripts in Python to improve automatic logging of library items
- Supervise a group of 10 student workers providing IT assistance to library patrons

### Clarion University

*Tutor*

Clarion, PA

Feb 2018 - May 2019

- Retaught students complex topics from all levels of courses
- Assisted with office hours for Intro to Programming II (C#) & Object Oriented (Java) classes

## SKILLS

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Programming Languages: Python, Java, C#, HTML/JavaScript/CSS, C/C++

Technologies: L<sup>A</sup>T<sub>E</sub>X, Robot Operating System (ROS), Gazebo, Flask, WebGME, dReach, SQL

## PROJECTS

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### Automatic Text Summarization *Python, NLTK*

- Compared common algorithms used in automatic text summarization including TF-IDF, TextRank, and Seq2Seq Neural Networks
- Currently researching further into sentence translation for a senior capstone project
- Gave a talk on this project at the PACISE Conference in 2019

## LEADERSHIP AND INVOLVEMENT

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### Association of Information Technology Professionals

Clarion, PA

Aug 2016 - Present

*President*

Aug 2018 - May 2019

- Ran weekly meetings to update members on activities of the group
- Hosted multiple hour long seminars on topics including version control and robotics

*Vice President*

Aug 2017 - May 2018

- Assisted in running weekly meetings to update members on activities of the group
- Hosted multiple hour long seminars on topics including version control and unit testing

## Clarion University Crystallography Contest

*Assistant (?)*

Clarion, PA  
Aug 2017 - May 2018

- Taught elementary school students about crystallography in a lab-like setting during seminars
- Formalized contest's rules along with other members
- Assisted with creation of the contest's website

## AWARDS

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<b>Dean's List</b>	Fall 2018, Spring 2019
<b>Elizabeth Ross AITP Scholarship</b>	2018, 2019
<b>George Lewis Scholarship</b>	2018, 2019