Lucas Frey

Corvallis, Oregon
Phone (971) 312-7266
Email lcsfrey@gmail.com
Website lcsfrey.me
LinkedIn linkedin.com/in/lcsfrey
Github github.com/lcsfrey

EDUCATION

Oregon State University – Bachelor of Science – September 2016 – June 2019

Major Computer Science Applied in Artificial Intelligence **Major GPA** 3.67/4.0

Minor Mathematics **Overall GPA** 3.58/4.0

Relevant Coursework

- Analysis of Algorithms & Data Structures
- Operating Systems (Comfortable in Unix)
- Software Engineering (Methodologies & Testing)
- Graph Theory (Graduate level course)
- Statistics for Engineers
- Linear Algebra

Awards

- President's List (2 terms)
- Dean's List (3 terms)
- Honor Roll (4 terms)
- Capital Manor's Foundation Scholarship (2016)

EXPERIENCE

- **Data Science Intern – Lam Research** June 2018 - Present
  - Developed Dense, Inception, and Resnet variant CNNs for image classification and segmentation
  - Achieved 97% pixel 6-fold cross-validation accuracy by training on only 20 images
  - Presented talk on Convolutional Neural Networks to a multi-disciplinary team of engineers
  - Worked in **Python** and **Jupyter Notebooks** and developed nets in **Keras** and **Tensorfow**
  - Documented development process, logged all analytical data and maintained file integrity using **Git**
- **Tutor in Computer Science** October 2017 - Present
  - Developed own curriculum to teach high school student **C++** and **Java** programming
  - Assisted student in achieving the highest score on the AP Computer Science Exam

ACADEMIC PROJECTS

- **Traveling Salesman Problem (TSP) Algorithms** built using **C++**
  - Implemented genetic and multithreaded heuristic algorithms to approximate the TSP
  - Outperformed entire class in 7 out of 7 competition test cases
  - Continued development outside of class building GUI in **Qt Creator** to display various graph algorithms
- **Aces Up Solitaire Game** built using **Java** and the **Ninja Web Framework**
  - Worked on an agile development team of 4 completing multiple 2-week sprints over the term
  - Utilized **Git** version control and a branch workflow to maintain the integrity of project files
  - Developed both mobile and desktop versions in **HTML**, **CSS**, and **JavaScript**
- **Robotics Club**
  - Led team of 6 on yearlong projects to develop robots to compete in the FIRST Tech Challenge
  - State finalists and two-time regional champions in competitions of 30+ teams each
  - Developed autonomous systems to complete various tasks utilizing touch, light, IR and rotation sensors
  - Volunteered at local middle school teaching children how to build and program Lego NXT robots

PERSONAL PROJECTS

- **TSP Graph Reader** built using **Python**, **OpenCV, pybind11,** and **C++**
  - Computer vision program that computes the TSP path from a graph drawn on paper
  - **C++** code returns the result to **Python** and **OpenCV** draws the path on the screen in real-time
  - Developed **Python** wrapper in **C++** for accessing graph algorithms
- **String Trie** and **Sequence Trie** built using **C++**
  - Engineered highly scalable structures for efficiently storing words and sequences of words
  - Developed **Python** wrapper in **C++** for accessing Trie objects and functions
- **Security Camera** built using **Python** and **OpenCV**
  - Engineered motion sensitive camera that can highlight movement in frame and write footage to files