EMMA GROTTO

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Education

Mount Holyoke College, South Hadley, MA
- Bachelor of Arts in Computer Science and Physics '19, Magna Cum Laude, GPA = 3.916
- Member of Sigma Pi Sigma American honor society in Physics, May 2019
- Rusk Prize for Distinction in Physics, May 2019
- American Association of Teachers Outstanding Learning Assistant Award, May 2018
- Bennett Prize for Excellence in Physics, May 2016

Online Resources
- Udacity: Intro to Machine Learning
- Codecademy: reactJS part 1 and 2, HTML, Intro to JavaScript, SQL, CSS

Skills

Languages: Python, JavaScript, Java, C, C++, R, XML, HTML, CSS, SQL
Tools: Eclipse, Atom, Jupyter, RStudio, Visual Studio, Git
Technologies: MongoDB, Unity, Gazebo, DataGraph
Libraries: NumPy, SymPy, matplotlib, reactJS, scikit-learn, ggplot, plotly, tidyverse, nltk, PIL, Java Swing
Laboratory: Oscilloscope, Plasma Etch, Spin Coater, Evaporator, Analog and Digital electronics

Projects

Sudoku Solver: Developed a sudoku solver using constraint satisfaction with the forward checking and minimum remaining values heuristics.
Woosh: Developed a program that emulates the UNIX shell by using the C functions: fork, wait and exec. Woosh allows paths to be added and command arguments.
Memory Manager: Coded memory management using a heap-like structure for available blocks of memory in C. Headers, containing the size and next/magic number, tracked the free and allocated blocks.

Experience

Software Engineering Intern, XVIVO Scientific Animation, July 2019 – present
- Developing an asset management system as a hybrid app using ReactJS, Electron and MongoDB

Giga Education Mentor, Mount Holyoke College Computer Science Department, Jan. 2019 – May 2019
- Supported CS students and facilitated an environment which enables success and learning
- Carried out code reviews with mentees to ensure concepts and code style is well understood

Student Tutor, Mount Holyoke College Physics Department, Sept. 2017 – Dec. 2017, Sept. 2018 – Dec. 2018
- Instructed students to investigate mathematical concepts and debug Python code
- Assisted and guided students with homework and lab problems

Research Student, Multi-Robotic Systems Lab, Mount Holyoke College, June. 2018 – Aug. 2018
- Calibrated multiple cameras using the openCV interactive calibration tool
- Assisted in creating robot models using Gazebo for simulations
- Integrated camera calibration parameters into robot models

Research Student, The Arango Lab, Mount Holyoke College, Aug. 2016 – Dec. 2017
- Assisted in developing and testing Quantum Dot Photovoltaic devices

Competitions

- **HackHolyoke 2017,** Mount Holyoke College
  Used Android Studio to develop an Adventure game about Women in Science. Designed images for the game and created the layout using XML with other team members. **Prize Winner**: Best Media Hack
- **Five College ASA DataFest 2019,** University of Massachusetts Amherst
  Used R in a group of 3 students to data wrangle and analyze a dataset. Visualizations and linear models were used to confirm patterns and trends found. **Prize Winner**: Top in Group