

Paul Magnus

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Computing Skills

- Advanced knowledge of Python, Bash/Linux
 - Working knowledge of C++, Java, HTML, and CSS
 - Some experience with R, MIPS Assembly, OpenGL
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Projects and Experience

pauljmagnus.com

PyShell: Shell Scripting for Python

February 2018 - May 2018

- Designed and implemented the PyShell language for easy shell scripting within Python.
- Researched varieties of existing shell languages.
- Expanded Bash-style syntax to allow for delayed execution and dynamic construction of shell statements.
- Managed multiple project deadlines throughout four-month project.

Genetic Programming: Artificial Intelligence for Space Invaders

September 2017 - December 2017

- Designed and tested a genetic programming system for machine learning of Space Invaders game.
- Experimented on the effects of different genetic operators and selection methods on population diversity and the effectiveness of evolved programs.
- Used the programming languages Clojure, Java, and Push together.

CSPy: Statically-Typed Python and Graphics System

May 2017 - July 2017

- Collaborated with other team members to develop a new dialect of Python designed for teaching introductory programming.
- Created and actively updated a related graphics system used by all introductory computer science courses at the college.
- Wrote maintainable code in a team environment for a multi-year project.

Economics Market Simulation in R

September 2017 - December 2017

- Developed a system for comparing the differences between model selection agents in a market simulation.
- Generalized simulation for arbitrary number of parameters and length of forecast formula.
- Executed research simulations for continuing professor's research with other team members.

Computer Science Teaching Assistant

February 2015 - May 2018

- Tutored and graded students in the Computer Science department at Hamilton College.
 - Guided students towards efficient and correct algorithms and solutions.
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Education

Hamilton College, Bachelor of Arts Cum Laude, Clinton, NY

September 2014 - May 2018

Concentrations: *Computer Science (Honors) and Mathematics*

Cumulative GPA: 3.76

Tompkins Prize in Mathematics

Relevant Coursework: Algorithms, Computer Architecture, Genetic Programming, Complex Analysis, Topology

Aquincum Institute of Technology, Budapest, Hungary

Fall 2016

Relevant Coursework: Computer Graphics, Computer Vision, Cryptography