Benjamin Porter

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EDUCATION

The University of Texas at Austin   **2017 - 2021**
Pursuing B.S. in Computer Science (Turing Scholars Honors Program)   GPA: 3.57
Coursework: Computer Architecture (H), Algorithms/Data Structures (H), Discrete Mathematics (H),
Competitive Programming, Statistics/Probability, Linear Algebra, Integral/Multivariable Calculus

EXPERIENCE

Research Intern - Parasol Laboratory, Texas A&M University   **Jun. - Aug. 2016**
- Implemented metrics in C++ using Parasol Motion Planning Library (PMPL) to evaluate ligand binding site candidates on protein surfaces, parsing protein database files and writing metrics to text files
- Proposed future application of metrics as features in a neural network approach
- Adhered to code quality standards and performed code reviews/check-ins
- Compiled a technical report and poster and presented findings at undergraduate research symposium

PERSONAL PROJECTS

Web Crawler and Search Engine   **Nov. - Dec. 2017**
- Implemented a web crawler and search query engine in Java
- Designed a web index using inverted indexing capable of storing 9000+ pages and a query language with precedence order and logical operations
- Developed a comprehensive testing framework, using graph algorithms to model pages and links and using JUnit to automate testing

Pest Control **- Team Lead**   **Nov. 2016 - Apr. 2017**
- Developed a video game in a team of four using the Unity engine in which the player takes on the role of an insect and completes various challenges
- Wrote mechanics for players to walk on walls and implemented user interface elements
- Facilitated effective communication/documentation and organized team meetings

Computer Architecture Projects   **Jan. - May 2018**
- Implemented an interpreter for a simple programming language with global variables and lambda functions
- Rewrote interpreter to compile source files into x86_64 assembly
- Designed single-cycle, multi-cycle, and pipelined processors using Verilog

Tetris   **Oct. 2017**
- Implemented Tetris game mechanics in Java, such as rotations and resolution of collisions
- Built an AI to play Tetris by weighting the possible moves and selecting the optimal choice

Judge for Programming Contests   **Jun. 2018 - present**
- Developing a framework to manage, accept submissions for, and judge programming contests, using Gitolite, React, and Electron

HONORS

Leo and Catherine E. Schein Memorial Scholarship   **Fall 2017, Spring 2018**
- Endowed scholarship from the Department of Computer Science for distinguished undergraduates in the Turing Scholars program

SKILLS

Proficient: Java, C/C++, Git, LaTeX, Unity   **Familiar:** x86_64 assembly, Python, SQL, Javascript, web frontend
Operating Systems: Linux, Windows

EXTRACURRICULAR ACTIVITIES
Competitive programming, Association of Computing Machinery

HIGH SCHOOL ACTIVITIES/ACHIEVEMENTS
National Merit Finalist (15,000 selected nationwide)
UIL Computer Science competitor