Benjamin D. Porter

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EDUCATION

The University of Texas at Austin **2017 - 2021**
Pursuing B.S. in Computer Science (Honors) GPA: 3.38
Turing Scholars Honors Program
Current coursework: Computer Organization/Architecture (H), Competitive Programming, Statistics/Probability
Past coursework: Algorithms and Data Structures (H), Discrete Mathematics (H), Integral/Multivariable Calculus

EXPERIENCE

Research Intern - Parasol Laboratory, Texas A&M University **Jun. - Aug. 2016**
- Applied sampling-based motion planning to predict ligand binding sites on a protein surface
- Implemented metrics in C++ using Parasol Motion Planning Library (PMPL) to gauge candidate binding sites' favorability, parsing protein database files and writing metrics to text files
- Proposed future application of metrics as features in a neural network approach
- Attended weekly group meetings and regular talks/thesis defenses
- 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 simple 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 Unity3D engine in which the player takes on the role of a cockroach 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

Fun **Interpreter and Compiler** **Jan. - Feb. 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

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

Judge for Programming Contests **Jan. 2018 - present**
- Developing a framework in Node.js and Express to judge submissions in programming contests

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, Git, LaTeX, Unity3D **Familiar:** C/C++, x86_64 assembly, Python, Javascript, web frontend
Operating Systems: Linux, Windows

EXTRACURRICULAR ACTIVITIES

Competitive programming, Association of Computing Machinery, Information and Systems Security Society

HIGH SCHOOL ACTIVITIES

National Merit Semifinalist
UIL Computer Science competitor