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DANIEL ZHENG

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EDUCATION

Pittsburgh, PA **University of Pittsburgh** **May 2020 (Expected)**

- Bachelor of Science in Computer Engineering, projected minors in Mathematics and Linguistics. Cumulative GPA: 4.0

Relevant Coursework

- Ongoing: Data Structures Computer Organization and Assembly Language, Linear Systems and Circuits, Digital Logic, Linguistics, Advanced Engineering Applications for Freshmen, Machine Learning by Andrew Ng (Coursera)
- Completed: Linear Algebra, Differential Equations, Honors Engineering Analysis, Physics 2, Principles of Scientific Reasoning, AP Computer Science, AP Physics C Mechanics, AP Physics C Electricity and Magnetism, AP Calculus BC, AP Statistics

WORK EXPERIENCE

Undergraduate Research Assistant **University of Pittsburgh** **January 2017-Present**
Pittsburgh, PA

- Member of particle physics research group run by Dr. Tae Min Hong. Working on software for the ATLAS detector at the Large Hadron Collider run by CERN. *C++/Python/ROOT*.

Director's Assistant **NJ Workshop for the Arts** **Summer 2014 and 2015**
Westfield, NJ

- Took inventories of, cleaned, and tuned instruments and performed various clerical tasks (filing, photocopying).

Web Coordinator **Taubman Piano Festival** **2013-Present**
Montclair, NJ

- Created and sent emails to piano teachers and students worldwide, maintained website and social media.

ACTIVITIES

Projects

- **SteelBeets**-Amazon Alexa skill that generates and raps rap lyrics from a Twitter feed. We scrape the target user's Twitter account, construct a Markov model, and combine that with a "Dope Learning"-derived model to create rhyming raps that have rhythm and reflect the interests found in the tweets. Made at TartanHacks 2017. *Python, Selenium, Node.js, AWS Lambda*
- **Diagnose Me**-Amazon Alexa skill that serves as a virtual medical assistant. Can send an emergency text message, give dosage information for O.T.C. medication, and perform preliminary medical diagnosis given symptoms. 1st Prize at the 2017 Pitt Challenge, Pitt's healthcare hackathon. *Node.js and AWS Lambda*
- **Contact Me**-(https://goog.gl/z8DhM8)-Android app that uses Java binding of Google's Tesseract OCR SDK. Converts picture to text that can be copied to clipboard, will eventually extract and save contact info to convert business cards to phone contact. Made at MHacks 8. *Java, Android Studio*
- **Percolator**-(https://goo.gl/EPd6XI)- Custom algorithms to model percolation across square and cubic lattices, as well as bond percolation across a square lattice.
- **ConvertBase**(https://goo.gl/Twbwip)-Base converter, also supports fractional numbers. *Python*
- **SudokuSolve**(https://goo.gl/ZSxMB3)-Solves Sudoku through recursive backtracking. *Java*
- **Blackjack**(https://goo.gl/meYBME)-Single player blackjack complete with GUI and multiple decks. *MATLAB*

Summer Programs

- **NJ Governor's School in the Sciences** (Summer 2015): Selective state-funded summer program of 85 top math and science students. Classes in math, computer science, neurobiology, special relativity. As part of an eight-person team, completed an image recognition algorithm from scratch in MATLAB, wrote a research paper, and presented findings.

AWARDS

- **Merck James J. Kerrigan Scholar** (2016)**:** One of 10/40 recipients nationwide to receive four-year scholarship.
- **National AP Scholar** (2016): Averaged score of 4 or higher on at least 8 AP Exams. Scored 5/5 on all AP Exams.
- **Presidential Scholar Candidate** (2016): U.S. Presidential Scholars Program, U.S. Department of Education.
- **Pitt Full-Tuition Scholarship** (2016): Scholarship covering four years of tuition at the University of Pittsburgh.

LANGUAGES AND TECHNOLOGIES

Intermediate: Java|C++|Python|MATLAB|Office|Windows|Linux
Basic: HTML|CSS|Javascript|Git|Visual Studio|Android Studio|ROOT