Ian Shin

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Education

The University of Texas - Austin, Computer Science, B.S. 2019 – 2023

- *Relevant Coursework*: Calculus II, Data Structures, Discrete Math, Computer Architecture, Probability and Statistics, Linear Algebra (ongoing), Operating Systems (ongoing), Competitive Programming (ongoing)
- *Activities:* Tech Team @ Freetail Hackers, Texas Convergent, UT Filipino Student Association

Skills

- *Languages*: Java, Python, JavaScript, Scheme, C + x86 Assembly (elementary proficiency)
- *Tools/Frameworks:* HTML, CSS, React.js, Flask, Express.js, Node.js, React Native, Numpy, Pandas, jQuery, REST, Git

Experience

University of Texas at Austin, *Undergraduate Research Assistant* *(Supervised by Dr. Chandrajit Bajaj)* May 2020 – Present

- Predicting optimal protein folding configurations using deep reinforcement learning and AMBER.
- Gathered and uploaded cryo-EM and PDB files to TACC's Frontera supercomputer for training and simulation.
- Employing machine learning techniques to model the SARS-CoV-2 virus's spike protein and capsid formation.

Mettle Works, *Summer Intern* May 2020 – Aug 2020

- Developed a full-stack web application for extracting useful insights and trends from unsorted data files.
- Parsed and analyzed tabular data, sent results to a React frontend from a Flask application using WebSockets.
- Determined outliers, entropy, and clusters within data points using K-means and DBSCAN.

Carnegie Mellon University, *Summer Research Intern* *(Supervised by Dr. Chris Harrison)* Jun 2019 – Aug 2019

- Part of the ClassInSight project, a service that evaluates teachers based on sensor-collected data in classrooms.
- Updated the developer's dashboard with new functionalities and improved accessibility with React.
- Added new sections to the user's dashboard that handle data deletion with Django, Python, and React.

Projects

autocite May 2020 – Present

- Building a Chrome extension that finds and displays directly-cited information on Wikipedia. Users can click results to instantly obtain a citation using the EasyBib API. Created using JavaScript, jQuery, mark.js, and HTML/CSS.

GluClose (**Second Place Winner**) **-** PennApps 2018 Sep 2018

- Created at PennApps, the world's largest college hackathon. Designed a product that approximates a person's blood sugar levels from saliva and mud in emergency situations and sends alerts to a mobile application if a threshold is passed. Collected data from an Arduino using the PySerial library and sent JSON-converted results to Firebase.

Vault - LAHacks 2019 Mar 2019

- Built a stock-sharing web application that allows a pair of investors across income groups to invest together, thereby lowering the barriers of entry to investing. Wrote a Node.js backend using Express.js and stored data to Firebase.

Extracurricular Activities

Freetail Hackers - *Tech Team (UT Austin)* Jan 2020 – Present

- Collaborated with my team to develop functionalities for hackathon-planning applications using Angular.js & HTML.

World Mission Frontier *- Instructor & Curriculum Designer (Kigali, Rwanda)* May 2016 – 2019

- Wrote curriculum, created projects, and traveled to Kigali, Rwanda every summer to teach coding and basic robotics with Raspberry Pi and Python to Rwandan students.