Ian Shin

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Education

University of Texas - Austin Aug. 2019 – May 2023
Computer Science, B.S. & Mathematics, B.S. *GPA: 3.83*

- Data Structures, Computer Architecture, Competitive Programming, Linear Algebra, Operating Systems, Computer Networks, Natural Language Processing
- Calculus II, Discrete Mathematics, Probability and Statistics, Differential Equations

Skills

Languages: Java, Python, JavaScript, C
Tools/Frameworks: PyTorch, NumPy, Docker/Docker Compose, HTML/CSS, React.js, Node.js, Express.js, Flask, MongoDB, Firebase, SQL, React Native, REST, Jira, Linux, Unix, Git

Experience

Lockheed Martin May 2021 – Aug. 2021
Software Engineer Intern

- Collaborated in agile environment to build a cloud (AWS) data ingest & routing service with multicast capability.
- Containerized microservices with Docker Compose and implemented inter-service communcation with Redis.
- Migrated Flask web server to Node.js, updated multicast handling, and created unit tests for CI/CD pipeline.

Freetail Hackers (UT Organization) Jan. 2020 – Present
Tech Team *MongoDB, Express.js, React.js, Node.js, Angular.js, Python*

- Developed web & mobile applications and a Discord Bot for organizing and running hackathons.
- Worked on components for filtered searching, email sending, and database updating for MERN stack applications.
- Hosted multiple workshops on Git version control and Python at HackTX, Texas's biggest collegiate hackathon.

UT Computational Visualization Center May 2020 – May 2021
Undergraduate SWE Researcher *Python, PyTorch*

- Contributed to research for real-time tumor-tracking with 3D-object tracking using deep reinforcement learning.
- Preprocessed data from multiple datasets and trained deep Markov models for medical research.
- Restored legacy software *(TexMol - 2011)* through updating dependencies and rewriting CMake files.

Mettle Works May 2020 – Aug. 2020
Software Engineer Intern *Python, Flask, React.js*

- Designed and created an intuitive web application to extract useful insights from unsorted data files.
- Processed nginx data with pandas and NumPy to determine trends within data using K-means clustering.
- Utilized Flask, React.js, and WebSockets to display live calculations and results on analyzed data.

Samsung Research America May 2020 – Aug. 2020
Software Engineer Intern *Cancelled - COVID-19*

CMU Human-Computer Interaction Institute Jun. 2019 – Aug. 2019
Research Intern – ClassInSight Project *Python, React.js, PostgreSQL*

- Improved developer dashboard with frame-by-frame video navigation and greatly optimized image loading time.
- Added new interfaces and endpoints to web application for data deletion with Django, React.js, and PostgreSQL.

Projects

BERT for NER

- Performed Named Entity Recognition by fine-tuning a base DistilBERT model and creating a custom model with BERT, BiLSTM & CRF layers using HuggingFace, PyTorch, and NumPy. Trained on Twitter dataset and wrote extensive analysis and ablation study as part of project.

streak

- Created a web application that incentivizes users to maintain desirable streaks and habits using MongoDB, Express.js, React.js, and Node.js. Incorporated JSON web tokens, cookies, and hashed passwords (bcrypt).

GluClose *(2nd Place Winner)*: https://devpost.com/software/gluclose

- Built at PennApps XVIII in 2018; placed **second overall** out of over 200 teams. Constructed a device that approximates blood sugar levels from saliva and mud and notifies a mobile application by sending data from an Arduino using the PySerial library and collecting JSON-converted results in Firebase.