

VIVEK K HIMANI

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EDUCATION

Drexel University, Philadelphia, PA

B.S. in Computer Science (Honors), Minors: Mathematics & Data Science

June 2023

GPA: 3.93/4.00

Hong Kong University of Science & Technology, Kowloon, Hong Kong

Engineering Exchange & Research in Computer Science

Fall 2019

Dr. Pan Hui

Stanford University, Stanford, CA

Mathematics Pre-Collegiate Summer Institutes

Summer 2016

Full-Ride Scholar

ACADEMICS

Publications :

⇒ "SplitEasy: Practical Approach for Training ML models on Mobile Devices", **ACM HotMobile '21, SLDML '21**

⇒ "FedClean: Defense Mechanism Against Parameter Poisoning Attacks in Federated Learning", **IEEE ICASSP '22**

Selected coursework (H: Honors Level, G: Graduate Level, T : Taught the course as a TA) :

Deep Learning (G, H, T), Functional Programming (G, H), Machine Learning (H), Computer Networks & Security (T), Data Structures (T), Advanced Programming Techniques (T), Operating Systems, Concurrent Programming, Systems Architecture, Data Mining, Software Security, Probability & Statistics I-III, Calculus I-IV, Linear Algebra

WORK EXPERIENCE

Susquehanna International Group

Software Engineering Intern - Market Data Frameworks

March 2021 - September 2021

Philadelphia, PA

- Engineered the infrastructure of **C++** and **Python**-based network pipeline that **continuously listens to the exchange data** and alerts relevant teams in real time.
- Wrote high-performance **parsers** for the multi-cast feed received from the exchange using **C++**.
- Enhancing the back-end of **Django** and **PostgreSQL** web app used by 50 engineers for **data monitoring**.
- Developed deployment pipelines for containerized applications using **Docker**, **Kubernetes**, and **GitLab CI**.

Olak

Machine Learning Engineering Internship - Data Science

March 2020 - July 2020

Santa Clara, CA

- Built a **time-series model using BERT algorithm** to achieve 95% accuracy for an Autofill Chrome extension.
- Worked with **Tensorflow**, **PyTorch**, **MongoDB**, **Node**, **Angular**, & **TypeScript** to implement the model and deploy it as a Chrome extension.
- Improved the **overall performance of the system** by 20% and **reduced the algorithm complexity** by 20 times to configure the extension for low-powered devices.

PowerPlay

CEO, Co-Founder - Startup

July 2020 - Present

Gujarat, India

- Led efforts to build a social-networking solution to **connect amateur cricket players** in India.
- Bootstrapped the product prototype using **React Native**, **Django**, **PostgreSQL**, and **Google Cloud**.
- Working with developers and marketers to launch the app. Visit: <https://powerplayapp.online>.

PROJECTS & RESEARCH

- **LifeNest** – *Personal Project* - Single stop solution for **sharing the COVID-19 related resource leads** in India. Individually built using **Django**, **PostgreSQL**, **HTML**, **CSS**, & **JavaScript** in span of 2 weeks. Worked with non-profits to acquire 500 visitors and 100 providers in 1 week. Visit: <https://www.lifenest.io>.
- **SplitEasy** – *Research Project* - Refactored backpropagation for distributed training of models, and optimized the client-server communication cost by 10 times to **deploy a ResNet on an iOS device**. Published in **ACM HotMobile '21**, a workshop with 30% acceptance. Invited for a talk at **MIT Split ML workshop '21**.

ACTIVITIES & PROFESSIONAL DEVELOPMENT

- **Awards:** Dean's Honor List (2018-2021), Drexel University Isaac L. Auerbach Innovation Award (2021)
- **Scholarships:** Drexel Grant, Founder's Scholarship, Dragons Abroad Scholarship
- **Clubs:** Drexel Algorithm & Data Structures Club (**President**), Drexel CS Theory Reading Group
- **Hackathons:** ProfHacks 2021, DragonHacks 2020, DragonHacks 2019 (**Winner**), ProfHacks 2019