DZUNG NGUYEN

dzungpng.github.io • github.com/dzungpng • linkedin.com/in/dzungng
(573) 514 – 2413 • dzungng@seas.upenn.edu

EDUCATION

University of Pennsylvania: School of Engineering and Applied Sciences   Graduating May 2021
    BSE in Computer and Information Science: Digital Media Design, Minor in Mathematics
Selected Coursework: Data Structures and Algorithms (Java), Programming Languages and Techniques (Java), Networks and Social Systems on the Internet (Java), Physically-based Rendering (C++/OpenGL), Big Data Analytics (Python, SQL, Sparks).

Jack Kent Cooke Merit Scholarship Recipient
    One of the most competitive scholarships in the nation with a 1.6% acceptance rate, covering $40k in costs annually over 4 years.

Rewriting the Code Undergraduate Fellow
    Selected from thousands of applicants to participate in women-in-tech community and profession developments.

EXPERIENCE

CBRE Build | Seattle, WA   June 2019 - Present
Software Engineer Intern - Deal IQ Project: Asset and transaction management web application for brokers
- Used **SQL** to analyze transactions data and developed generator to create realistic test data in **Python**.
- Redesigning data processing pipeline for millions of transactions to runtime to under 20% of current 14 hour time.
- Working with 2 UI/UX developers to migrate front-end features from **Angular** to **React**.
- Participating in **Agile** development, **Kanban** framework, and robust code review with **Gitlab**.

University of Pennsylvania | Philadelphia, PA   May 2019 - Present
Teaching Assistant – CIS 240: Introduction to Computer Systems
- Hold weekly office hours and grade exams for computer architecture course with over 100 students enrolled per semester.

Perelman School of Medicine | Philadelphia, PA   Dec. 2018 – June 2019
Undergraduate Research Assistant - Arterial Hemodynamics and Cardiac Imaging Lab
- Researched 6 cardiac catheterization waveforms and their relationships to the cardiovascular system.
- Preprocessed training data and generated binary masks from 1,500+ cardiac wave scans using **OpenCV** and **MATLAB**.
- Designed a U-net model in **Keras** and trained with **AWS GPU** to segment aortic waves from overlapping waves. To be used as a plugin in a software helping physicians quickly analyze catheterization waveform scans.

Ami Artificial Intelligence | Ho Chi Minh City, Vietnam   May – July 2018
Software Engineer Intern – Chatbot Service
- Worked closely with company's CTO to conduct research on best tools and practices in **RESTful** services, microservices, app management (**Docker**, **Azure**) and wrote reports to software team.
- Improved production efficiency by 12% for 30+ engineers as measured by weekly tasks accomplished by building a chatbot using **Microsoft Bot Framework SDK** for **Node.js**.

PROJECTS

PennCourseRec   May 2019 - Present
A UPenn course recommendation engine web application
- Using **Bootstrap** to implementing user interface components such as displaying and filtering results.
- Manage data set of thousands of UPenn courses in **Django SQLite** database.
- Designing an **NLP** model to process user's ideal course description and recommend the most relevant course.

Mini Minecraft   Nov. 2018 – Dec. 2018
A Japanese-ink rendition of Minecraft
- Built a procedurally generated, noise-based 3D terrain that expands infinitely in all directions in **C++**.
- Decreased gameplay latency by 4 times with **multithreading**.

INVOLVEMENTS AND LEADERSHIP

Penn Women in Computer Science | Mentor   Sept. 2018 – Present
Mentor incoming freshman students on course selection, extracurriculars, and coursework management.

Penn AMC SIGGRAPH – Special Interest Group on Computer Graphics | External Relations Chair   Sept. 2018 – Present
Plan networking events with other local chapters, organize alumni panels, run skill-sharing workshops.