DUC THANH NGUYEN

Software Engineer • Developer

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EXPERIENCE

Web Developer

Carbon8 (Vietnam Office)

May 2018 – Aug. 2018 Nha Trang, Vietnam

- Developed three commercial websites with user authentication, diverse animations and shopping cart features with **HTML5**, **CSS3**, **JavaScript**, **JQuery**, **Bootstrap**, **Wordpress**, **Webpack**, **Gulp**, **PHP** and many more libraries and tools.
- Learned responsive web design and modular web design.
- Worked closely and effectively with other developers through **Redmine** and **Git**.
- Underwent strict QA processes.
- Wrote animations with **Fullpage**, **MagicScroll**, **SlickSlider** and **JQuery**.

Team Leader at Hack The North 2018

Facelink

September 2018

- Developed a facial recognition web app that securely links facial signatures to resumes, allowing students to submit resumes at job fairs by scanning their faces at employers' booths.
- Implemented user authentication and user database using **Firebase**; Implemented facial recognition using **Kairos**.
- Implemented UI using **HTML5**, **CSS3**, **Bootstrap**, **JQuery** and **JavaScript**.

Member Developer

Project Lynn3D

July 2018 - Nov. 2018 Ho Chi Minh, Vietnam

- Developed a **Python** demo API to convert geometric and texture data to .gltf/.glb as specified by Khronos Group's specifications with the application of byte padding, binary container and Data URI.
- Implemented a demo **Android** application with **OpenCL** and **C++** modules to parallel compute array sums using the power of both the CPU and the GPU.
- Implemented a demo **Android** application that uses **OpenCV** to apply filters, like Gaussian blur and Linear Interpolation, to real-time camera feed.

Side Project

Basic Shop API

Jan 2019

- Implemented a Shop API using **Ruby on Rails** and **GraphQL** with **ActiveRecord** relationships between User, Cart, Product and Cart Items.
- Wrote unit tests to test each connection of the API endpoint.

EDUCATION

B.S. in Computer Science

University of Waterloo

Sept. 2017 – Present

Courses:

- CS 241E: Foundations of Sequential Programs (Advanced)
- CS 246E: Object-oriented Programming in C++ (Advanced)
- CS 240E: Data Structure and Data Management (Advanced)

PROFESSIONAL SKILLS

C/C++	●●●●●●●
OOP	●●●●●●●
Python	●●●●●●●
JavaScript	●●●●●●○
Git	●●●●●●●
Ruby on Rails	●●●●●●○
GraphQL	●●●●●●○
Frontend(HTML5/CSS3)	●●●●●●○
SQL	●●●●●○○
NoSQL	●●●●●○○

PERSONAL SKILLS

Problem-solving	●●●●●●●●
Teamwork	●●●●●●●●
Self-motivation	●●●●●●●●
Eagerness to Learn	●●●●●●●●
Effort	●●●●●●●●
Patience	●●●●●●●●

Research Intern

A*STAR Institute of High Performance Computing

Feb. 2017 - July 2017

- Implemented a cross-platform GUI for a **MATLAB** mode solver script using **Python** and **GTK3** to improve the accessibility for users who do not know **MATLAB**.
- Implemented multi-threading to speed up the heavy computations by the mode solver script.
- Modelled semiconductor waveguides in **Silvaco TCAD** and **Genius TCAD** to compare the difference in performance in different electric fields simulated by the two softwares.
- Packaged, built and wrote makefiles for various **Linux** open-source programs.

Side Project

UWCourse

Ongoing

- Developing a web app written with **Python**, **Flask**, **MongoDB** and **Docker** to help UW students plan their courses.
- Using UW's Open Data API to access data about courses and instructors.

CS 246E Group Project

Baby Vim

Nov. 2018 - Dev. 2018

- Built a baby version of Vim using **C++**, **ncurses** and good **OOP** practices, with all the essential commands like the movement commands, the yank and copy commands and the basic colon and slash commands.
- Implemented the complex but efficient Rope data structure to handle text, and implemented a finite state machine to support more complex Vim commands.

Side Project

TicTacToe

March 2018

- Built a cross-platform GUI implementation of TicTacToe using **Python** and the awesome library **Kivy**.

Side Project

Kijiji Scraper

April 2018

- Built a **Python** web scraper that uses **XPath** to extract data, like prices and capacity, from housing listings in Waterloo and saves the data to a local **MySQL** server.
- Wrote injection-safe transactional **SQL** queries using **Python** and **MySQLdb**; Implemented a pool of **MySQL** connections instead of only one connection at a time.