Keanu Natchev

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English – French – Bulgarian – Spanish & German (Basic understanding)

Education

Bachelor of Software Engineering **September 2017 - Present**
McGill University, Montreal, QC
College Diploma in Pure and Applied Sciences **August 2017**
Dawson College, Montreal, QC
High School Studies Diploma **June 2015**
Collège Jean-Eudes, Montreal, QC

Technical Skills

Languages: Java, C, Python, CUDA, JavaScript, HTML5, CSS3, OCaml, VHDL, ARM, BASH
Tools/OS: Git, Cucumber, Gradle, Maven, Heroku, Travis CI / Windows, Linux, Ubuntu
Framework: React, Spring Boot, Vue.js
IDEs: Visual Studio Code, Eclipse, Adobe Dreamweaver

Work Experience

Freelance Shopify Website Template Customization for cimerestudio.com **March 2021**
Supervisor and Floor Clerk at Shoppers Drug Mart **June 2016 - December 2019**

Personal Engineering Projects

Portfolio Website (available on GitHub and at keanunatchev.com) (IN PROGRESS) **July 2021 - Ongoing**
- Building a Portfolio Website using **React**.

Binary Search Tree Visualizer (available on GitHub) **December 2020**
- Built a Binary Search Tree Visualizer **Java Applet** using **VSCode** with features such as adding/removing nodes, generating random trees, and traversal animations.

University Engineering Projects

Operating System in C **January 2021 - March 2021**
Operating Systems (COMP 310 & ECSE 427)
- Built an **OS Shell in C** with **shell memory** to store and update variables using the **set VAR STRING** command (more commands were available such as **help**, **quit**, **print VAR**, **run SCRIPT.TXT**).
- Upgraded the OS with a **Kernel** to house the **Shell** with an added **exec prog1 prog2 prog3** command for program execution that was handled using a simulated **1 core CPU**, **Process Control Block (PCB)** for each program, a **ready queue** for the PCBs, a **CPU scheduler** and **temporary simple memory**.
- Further upgraded the **OS** with a **Boot Sequence** as well as a **Memory Manager** that utilized **RAM pages, frames, and Page Fault** handling for the **exec prog1 prog2 prog3** command.

Data Structure and Algorithm Visualization Website **September 2020 - December 2020**
Software Engineering Practice (ECSE 428)
- Worked in an **agile environment** using **SCRUM** (team of 8 people) to create a website application to visualize sorting algorithms applied to data structures with using **React**, **Anime.js** for animations, and **GitHub** for version control.
- Worked on the **Array** and **Doubly Linked List** data structure pages of the website.

Lego EV3 Mindstorms Robot **September 2020 - December 2020**
Design Principles and Methods (ECSE 211)
- Worked in a design team of 6 to develop a robot that navigated in a virtual obstacle course in **Webots**.
- Was responsible for the hardware design development in **LeoCAD/Webots** as well as the **hardware documentation**.
- Implemented the Localization class of the robot controller in **Java** and optimized **threading** between all other classes.

Event Registration System **January 2020 – April 2020**
Introduction to Software Engineering (ECSE 321)
- Created a website application to register events with date, time, participants, artists, and Google payment.
- Used **UML Lab** for domain modeling, **Heroku** for database deployment, and **Travis CI** for continuous integration.
- Implemented the **REST API** backend using **Java Spring Boot** and **Gradle**.
- Implemented the website's frontend with **Vue.js**, **NPM**, and **JavaScript**.