Hoang Phan

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Skills

Languages: C++, Scala, Python, Javascript, Scheme
Technologies: Scala.js, Monix, Redux, React.js, Node.js, scikit-learn, keras, OpenCV

Experience

Google, *Software Engineering Intern* **Sept - Dec 2019**
- Working on Google Search team, optimizing search tool for internal log.

Yahoo! / Verizon Media Group, *Backend Engineering Intern* **Sept - Dec 2018**
- Worked on video-related machine learning applications at Verizon (Yahoo Finance, AOL, ...)
- Reduced the runtime of a real time video process written in **Python** down by 75 percent
- Implemented and trained a voice-to-text model based on **Kaldi ASR**
- Created a debug dashboard for the video recommendation system using **React.js**
- Placed 10th on the OathML - a company machine learning competition - by implementing a clickbait detector.

Anduin Transactions, *Software Engineering Intern* **May - Sept 2018**
- Helped design e-signatures features for a capital market transactions platform using **Scala**
- Built front-end components with **React.js** and **Redux** for the e-signature component.
- Wrote API and designed data schema to assist with saving and creating signature templates

KMS Technology, *AI Software Engineering Intern* **June - Aug 2017**
- Designed a NLP **Naive Bayes** resume-parsing algorithm in **Python** for a recruiting chatbot
- Applied machine learning to classify resume section and then used Dynamic Programming to optimize the text extraction

Awards and Honours

Silver medal *in Asia Pacific Informatics Olympiad* **C++**
- Placed **2nd** in Vietnam and 35th among 164 students from 30 countries in a algorithm competition.

First place *in Bloomberg Code B* **Python**
- Placed **2nd** in Algorithms and **1st** in UI Design in a strategy game algorithm design hosted by Bloomberg.

8th place *in C1 Terminal Live* **Python**
- Placed **8th** out of 40 teams in an strategy game algorithm design competitions hosted by Citadel.

Best Machine Learning App *in Hack the Valley 2018* **Javascript, Python**
- Created a prototype for Fruitify, an smoothie recipe suggesting app based on leftover fruit through camera.
- Received the best Machine Learning application out of more than 50 teams across North America.

Projects

C-subset Compiler **C++**
- Wrote a compiler from C programming language to MIPS Assembly utilizing parse tree and LR1 machine.
- Implemented optimizations like constant folding, constant propagation

Chess Game **C++**
- Created an OOP Design of a Chess game consisting of two players and bots
- Utilized multiple design patterns such as **MVC, Strategy, Observer** and **Memento**
- Implemented a chess playing bot using Minimax algorithm with Alpha Beta pruning

Scene Seeker **Python, Javascript**
- A web demo of a context-based scene searching algorithm of Youtube videos using machine learning technique.

Toxic Comments Detector **Python**
- A personal side projects experimenting on multiple multi-label text classification models using **keras**
- Placed in the **25% percentile** of a data science competition on **Kaggle** with accuracy more than **80%**

Education

Bachelor of Computer Science and Statistics *University of Waterloo* **2017 — 2022 (expected)**
Major Average: 93%
Relevant courses: Compilers, Object Oriented Programming, Functional Programming, Algorithm