

Stefan Heng

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EDUCATION

- **University of Victoria** Victoria, British Columbia, Canada
Bachelor of Science in Computer Science; GPA: 3.90 Sep. 2015 – Sep. 2018

EXPERIENCE

- **Google, Inc.** Waterloo, ON, Canada
Software Engineer Intern Sep 2018 - Present
 - **Stackdriver-Google Cloud Platform:** Worked for the Stackdriver Distributed Tracing team, with the goal to enhance the search feature of the Trace product.
 - **Autocomplete Search:** Implemented a feature that suggests search keywords based on the user's most frequent data. Used MapReduce to analyze and aggregate each user's most frequent data; created an API endpoint to retrieve the suggested keywords; Finally, replaced the basic UI search bar by an advanced filter chip interface using the suggested keywords.
 - **Analysis Report:** Analysis report is a feature to aggregate critical metrics from user data and then to be displayed in the UI. I made analysis report more customizable by adding a search bar to restrict the analyzable data. This feature boosted the customer search traffic by 20%
 - **Technology:** C++, Go, Java, Javascript, TypeScript, Angular, Jasmine UI Test, MapReduce
- **Amazon, Inc.** Victoria, BC, Canada
Software Engineer Intern May 2017 - Sept 2017
 - **Ecommerce:** Worked for the ecommerce team at Abebooks, a subsidiary of Amazon. Designed and implemented the integration of a new payment service to the company systems to evaluate the possibility of future business. Eliminated 1 out of 4 options of potential online payment service.
 - **Online Payment:** Modified the online payment API and migrated Oracle SQL to PostgreSQL within the ecommerce services.
 - **Technology:** Python, Java, Groovy with Spring MVC, JUnit, Oracle, PostgreSQL, AWS.
- **Realty Server, Inc.** Victoria, BC, Canada
Software Engineer Intern Sept 2016 - Dec 2016
 - **Backend API development:** Contributed to a backend web API that unifies all isolated Android, iOS and web applications of the company to one system, thus reduced future backend development to a single platform.
 - **Upload Video feature:** Implemented a feature to allow realtors to directly upload videos, thus eliminated 100% cost from third party storage.
 - **Technology:** Java, Velocity template, Jersey as Web Service, PostgreSQL, Javascript, JQuery.

PROJECTS

- **BattleSnake:** AI Snake that fights against other snakes in the classic Snake Game. Won 1st place among 100 teams in BattleSnake 2018 for \$1000. Implemented pathfinding algorithms, alpha-beta and genetic algorithm. C++.
<https://github.com/dukeng/snek-two>
- **Github Visualization:** Data Visualization webapp that queries Github repositories and compares important metrics to help developers decide the best libraries to use. Won 1st place in HackUvic 2018. VueJS, GithubAPI.
<https://github.com/dukeng/github-radar>
- **Music Mixer:** Automatic Music Mixer: Python Application that takes two harmonically similar songs and automatically generates a mashup. Used music retrieval techniques and signal processing algorithms. Python Jupyter notebook.
<https://github.com/dukeng/Music-Mixer>

PROGRAMMING SKILLS

- **Languages:** Python, Java, Javascript, C++, C, TypeScript, Go
- **Technologies:** AWS, GCP Stackdriver, MapReduce, Angular, Jasmine, JUnit, SQL