Ben Chapman-Kish

 github.com/BenChapmanKish | ⌂ ben-ck.com | in linkedin.com/in/ben-chapman-kish

Skills

Languages: Python, Java, C++, C, JavaScript, Kotlin, Swift, Objective-C, Rust, SQL, Regex, Shell
Tools/Libraries: Git, JIRA, Docker, Node, Django, TensorFlow/Keras, CUDA, GraphQL, Thrift, Hadoop, Kafka

Professional Experience

FACEBOOK
(Remote) New York, NY

Software Engineering Intern   September – December 2020

- Improved ad matching throughput by up to 1,500x by re-designing indexing system to be locally-cacheable and require fewer database cross-references
- Configured profiling to identify bottlenecks in ad pipeline and monitor uptime across schema migrations

minted.
San Francisco, CA

Software Engineering Co-op   January – April 2020

- Rewrote customizer system to reduce dependency on 3rd party services and improve load times by 30%
- Deployed advanced user segmentation, allowing company to market more relevant products to customers

Google
Montreal, QC

Software Engineering Intern   May – August 2019

- Scaled debugging pipeline to handle 400x more traffic by migrating to better-suited data store and optimizing SQL queries, allowing engineers to quickly identify and track a greater variety of bugs
- Reduced maintenance costs by consolidating pipeline logic into smaller modules with full test coverage

toast
Boston, MA

Software Engineering Co-op   September – December 2018

- Solved concurrency bug by designing thread-safe system for calculating prices, reducing crashes by 12%
- Created tool with Gradle and JDBC to replicate production data in a local environment, minimizing time for developers to find and address customer-reported problems

TRIBAL SCALE
Toronto, ON

Agile Software Engineer   January – April 2018

- Reduced reliance on server in major radio app, reducing load on server and improving load times
- Implemented event planner and restaurant reservations for large cruise company's app

Defence Research and Development Canada
Toronto, ON

Mobile Application Developer   May – August 2017

- Built and deployed high profile mobile applications using Ember and Cordova
- Saved $25k per app in contracting fees by identifying and solving issues with device portability

UNIVERSITY of GUELPH
Guelph, ON

Machine Learning Research Assistant   July – August 2016

- Trained deep learning models with Caffe to achieve optimal performance for facial pose estimation
- Designed and programmed framework for crowd-controlled gaming using Python and OpenCV

Education

University of Waterloo	Expected 2016 – 2022
Candidate for Bachelor of Honours Computer Engineering	Expected 4th year GPA: **87%**

Notable Courses:

ECE 457A: Cooperative and Adaptive Algorithms
- Genetic algorithms, swarm intelligence, reinforcement learning, meta-heuristic search techniques

ECE 457B: Fundamentals of Computational Intelligence
- Deep learning and CNNs, data preparation and feature selection, fuzzy logic decision-based systems

ECE 459: Programming for Performance
- Reduced-resource computation, GPU kernel design, process profiling, self-optimizing software

ECE 454: Distributed Computing
- Consistency and replication, RPCs, virtualization, fault tolerance, real-time stream processing

ECE 458: Computer Security
- Practical cryptography, trust & threat models, intrusion detection, privacy-preserving machine learning

PACS 315: Engineering and Peace
- AI-assisted conflict resolution, digital humanitarianism, technological stewardship principles

Projects

QuickPic — 2018
- Created social network with iOS client that can take, edit, and send pictures to other users
- Implemented backend server with Node and Express to manage users and facilitate user interaction

DecorAssist — 2018
- Developed service to assist lay people with interior design for a hackathon, with web and mobile clients

BlackMirror — 2018
- Built raspberry pi-powered smart mirror and mobile app to control it for a company hackathon

Slack-SuperBot — 2016
- Developed python bot that communicates with Slack, Google, and Wikipedia APIs
- Utilized Markov chains to simulate communication patterns of workspace members

Pebble Apps — 2015 – 2016
- Built smartwatch apps in C using event-driven programming to interact with sensors and actuators

Awards

Recipient ------------	University of Waterloo President's International Experience Award	2018, 2020
Recipient ------------	University of Waterloo President's Scholarship of Distinction, parts 1 & 2	2016, 2017
Winner --------------	University of Waterloo ECE Design Days	2017

- Designed Arduino-powered ball launcher and wrote an Android app to control it

Top 10 Finalist ----	University of Waterloo EngHack hackathon	2017

- Created Android app for coordinating study groups featuring Facebook login and Firebase database

Extracurricular Leadership

ECE Society --------------------	**Founder, Co-President**	Orientation Week --------------------	**Leader, Director**
Engineering Society --------------	**Class Representative**	A Cappella Club --------------------------	**Section Lead**