Charles (Chuan Yu) Bai

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Technical Skills

- **Languages/Frameworks**
    - Golang, Ruby/Ruby on Rails, C#/.Net Core, Javascript/React/Redux, Java/Android,

- **Technologies Used**
    - Workflow: JIRA/Bitbucket, Jenkins, Concourse
    - Frameworks: Kubernetes, Kafka, Redis, SQL, ElasticSearch, OAuth2, MongoDB

Work Experience

- **Software Engineering Intern, Tesla** | Palo Alto, CA, USA
  Jan 2019 - Aug 2019
    - Designed and implemented a new DSL/data-driven db architecture for our car computer provisioning service in rails, and oversaw its gradual integration into all of production
    - Added a templatized temporary access request flow for our golang authorization and identity management server and integrated the flow with our internal messaging platform
    - Architected an inter-environment kafka-based firmware package migration system
    - Modernized old internal tooling with React/Redux and backend API changes

- **Software Programmer, Statistics Canada** | Ottawa, ON, Canada
  May 2018 - Dec 2018
    - Took a lead role in bringing up an internal survey metadata management and data transformation application (DB design, CI pipelines, .NET 2.0 Core stack)
    - Implemented a smart url rule-based caching layer in our Rest APIs using C#'s Redis wrapper to reduce the number of end to end calls on our survey backend

Projects

- **Thunderbots Firmware** | UBC Thunderbots Design Team
  Sep 2016 - Present
    - Created a discrete motor model in C (voltage, timestep $\rightarrow$ torque) with motor specifications, MATLAB simulations, and log data validation
    - Worked on rewriting C firmware functions following electrical and hardware changes
- **Location Time Tracking App** | Personal
  Jan 2017 - May 2017
    - Created an app that would allow you to create a list of locations, and periodically check and log any time spent at these locations, powered by Android's Location API and Android Room (SQL orm)
    - UI elements and async/persistent services was the focus of this app

Education

- **University of British Columba** | Vancouver, BC, Canada
  Bachelor of Applied Science in Computer Engineering, Sept 2016 - April 2021
    - Teaching Assistant for CPEN 211 Introduction to Microcomputers
    - 86% cumulative average (4.0/4.3 GPA), Dean's Honor List