Charles (Chuan Yu) Bai

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Technical Skills

Languages/Frameworks
- Golang, Ruby, Javascript, C#, Java, C/C++

Technologies
- Git, JIRA/Bitbucket, Jenkins, Concourse, Confluence
- React, .NET Core, AWS ECR & ECS, K8s/Docker, Ruby on Rails, Express, Kafka, MongoDB, OAuth

Work Experience

Software Engineering Intern, Tesla | Palo Alto, CA, USA

Jan 2019 - Aug 2019
- Built a configuration management app (with a DSL, db, UI) to replace Tesla's current 5 year old manufacturing workflow, increasing factory uptime and decreasing developer intervention
- Added a templated temporary access request flow to Tesla's authorization service, with integration to Tesla's messaging platform, improving security and service center productivity
- Architected a kafka-based firmware data migration system in preparation for Tesla's Shanghai factory environment
- Redesigned outdated tooling with React/Redux and API changes, improving page load times by 200%

Software Programmer, Statistics Canada | Ottawa, ON, Canada

May 2018 - Dec 2018
- Implemented a URL rule-based caching layer with .NET's distributed caching API to reduce the number of end to end calls on our application backend
- Modularized application design process by creating a reusable library of view components and controller superclasses for dependency management
- Took a lead role in designing our team's survey management and data transformation application through usage of .NET Core 2.0, CI pipelines setup, db architecture

Projects

UBC Thunderbots Firmware | Autonomous Soccer-Playing Robot Design Team

Sep 2016 - Present
- Created a discrete motor model in C with motor specifications, MATLAB simulations, and log data validation
- Rewrote many C functions for our freeRTOS robot firmware following electrical, hardware changes

Location Time Tracking App | Personal Use

Jan 2017 - May 2017
- Used Google's Location API and Adroid's GPS Service to periodically log time spent at specified locations, powered by Android Room (SQL orm), developed in Android Studio

Education

University of British Columba | Vancouver, BC, Canada

BA.Sc. in Comp. Engineering, Sept 2016 - April 2021
- 86% cumulative average (4.0/4.3 GPA) w/ UBC CO-OP , Dean's Honor List
- CPEN 211 Teaching Assistant, Introduction to Microcomputers