

Bradley Hsu

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Work Experience

Roblox

INCOMING SOFTWARE ENGINEER

Incoming September 2024

San Mateo, CA

- Incoming Software Engineer @ Roblox, Team TBD

Amazon Web Services

SOFTWARE ENGINEER INTERN

May 2023 - August 2023

Seattle, WA

- Member of AWS Timestream, a serverless distributed time series database
- Built system to expose customer ingestion metrics to customer dashboards; Guided deploy to production handling 1Bn+ metrics/week
- Optimized system to batch Cloudwatch metrics calls, decreasing AWS Cloudwatch costs 80%
- Owned project to update customer facing APIs to clarify most common customer confusion, working crossfunctionally with product team
- Started weekly AWS intern discussion group covering systems design and design of internal AWS systems (EC2, Lambda, Chime)
- Technologies used: AWS (SQS, EC2, Cloudformation, etc...), Java, Python, Bash

Amazon Alexa

SOFTWARE ENGINEER INTERN

June 2022 - August 2022

Bay Area, CA

- Member of Amazon Alexa Shopping pFase team, focusing on providing personalized shopping experiences through Amazon Alexa
- Reconfigured cache of external API called on every call of core backend service handling 100M+ calls/week
- Designed and implemented service to update cache on source of truth updating, ensuring consistent customer experience
- Built service to scale to 1000 requests per second; service currently in production handling more than 10M+ requests/month
- Increased effective cache hit rate from less than 5% to 50%; as a result, decreased latency of team's core API service by 10%
- Technologies used: AWS (Lambda, SQS, ElastiCache, EC2, Cloudformation, etc...), Java, Python

Washington University in St. Louis

TEACHING ASSISTANT FOR GRADUATE LEVEL CS CLASSES

August 2022 - Current

St. Louis, MO

- Helped design and head TA first iteration of graduate level class on Natural Language Programming (CS 527A) under Professor Chenguang Wang and first iteration of graduate level class on formal methods for verifying autonomy (CS 537T) under Professor Hussein Sibai

Sibai Lab - Washington University in St. Louis

RESEARCH ASSISTANT

January 2023 - Current

St. Louis, MO

- Working directly with Professor Hussein Sibai, on formal verification for robustness guarantees in graph neural nets

Selected Projects

HackWashU Website and Applications Management System

VUE.JS, JAVASCRIPT, GITHUB ACTIONS, DOCKER, AZURE, DJANGO, GOOGLE ANALYTICS, FIGMA

- Led crossfunctional team of 8 artists and engineers to design and build website and application system for HackWashU hackathon
- Website served 10k+ visitors per month; Application system handled about 1000 applications

Eco2Go Tracker - Winner at Hacktech 2021

REACT, JAVASCRIPT, TENSORFLOW.JS, GOOGLE CLOUD PRODUCTS

- Selected as winning hack at Caltech's Hacktech 2021; Created tracker for university Eco2Go recycling program

Activities/Leadership

Hack WashU

CO-FOUNDER; CO-PRESIDENT

January 2022 - Current

- Co-founded crossfunctional team to plan yearly hackathon with \$60k+ budget and 250+ attendees; First iteration ran October 2022
- Connected sponsors (Microsoft, Github, Mastercard, etc) with WashU undergrad talent; Helped 10+ classmates get internships
- Owned hackathon tech infrastructure; Led development + design team to create hackathon website and hackathon application system

Skills

Languages	Kotlin, Rust, Java, Python, HTML/CSS, JavaScript, TypeScript, C++, C, C#, Matlab
Libraries/Frameworks	NumPy, Pandas, Sklearn, Keras/Tensorflow, Pytorch, React, Node.js, Express.js, Vue.js
Tools	MongoDB, Google Cloud Platform, AWS, Docker, Github Actions

Education

Washington University in St. Louis

B.S. IN COMPUTER SCIENCE AND MATH (PROJECTED)

St Louis, MO

Expected Graduation: May 2024

- Relevant Coursework: Data Structures and Algorithms, Data Science, Intro to AI, Management, Linear Algebra, Vector Calculus, Systems Software, Human-in-the-loop Computation, Visual Screen Design, Statistics, Real Analysis, Machine Learning