ALEX DING

Website: alexding.me | **Email:** alexander_ding@brown.edu |**Github:** alexander-ding | **LinkedIn:** alexander-j-ding

Education

Brown University *September 2020 - May 2024*
Concurrent B.S.. and M.S. in Computer Science | GPA: 4.00

> **Relevant Courses**: Operating Systems, Programming Languages, Software Security and Exploitation, Data Science, Machine Learning, Deep Learning, Computer Graphics, Prescriptive Analytics, Blockchains, Information Theory, Statistical Inference, Abstract Algebra.

Work Experience

Software Engineering Intern *September 2022 - December 2022*
Google, GCloud GCP

Software Engineering Intern *June 2022 - August 2022*
Bloomberg L.P., Data Science Runtime

> Built **Kubernetes**-native toolings to easily define end-to-end pipelines on **Argo** workflows capable of building, training, and serving ML models straight from source code to production, deployed to clusters with **1000+** tenants.
> Coordinated across the org to design cross-cluster RBAC authentication with token exchange, cross-cluster IO with **GraphQL**, and cloud-native containerization with **Buildpacks**, implemented using **Go**, **Python**, and **Docker**.
> Improved **Jenkins** integration to support **semvar**-compliant CI/CD of Argo workflow templates.
> Packaged cluster resources as **Helm** charts and orchestrated seamless migrations with **0** cluster downtime.
> Ran workshops and published internal tutorials to promote adoption of new toolings, reaching **100+** engineers.

Projects Director *June 2021 - Present*
Full Stack at Brown

> Coordinated **30+** project teams and directly managed several high impact projects, including Hours, Brown CS's TA hours queue management platform built in **Go** and **TypeScript** used by **1000+ students/month**, and The Critical Review, Brown's course review website used by **5000+ students/month**.

Publications

*Complete publications available on my **website***

> Bryce Blinn, **Alex Ding**, R. Kenny Jones, Manolis Savva, Srinath Sridhar, Daniel Ritchie, "Learning Body-Aware 3D Shape Generative Models." **SIGGRAPH Asia 2022**. *In Review.*
> **Alex Ding**, Ying Li, Qilei Chen, Yu Cao, Benyuan Liu, Shujiao Chen, Xlaowei Liu, "Gastric Location Classification During Esophagogastruoduodenoscopy Using Deep Neural Networks." **IEEE BIBE** 2021.
> **Alex Ding**, Qilei Chen, Yu Can, Benyuan Liu, "Retinopathy of Prematurity Stage Diagnosis Using Object Segmentation and Convolutional Neural Networks." **IJCNN** 2020.
> **Alex Ding**, Yan Gu, "An Evaluation of UPC++ by Porting Shared-Memory Parallel Graph Algorithms." **MIT PRIMES** 2019.

Projects

*Complete projects available on my **website***

SAT Solver

> Blazing fast solver for NP-complete boolean satisfiability problems powered by watched literals, conflict driven clause learning, custom variable decision heuristics, and random restarts, built in **Julia**.

CipherBusters

> LSTMs and transformers trained to crack classical cipher schemes using **TensorFlow** and **Python**.

PiazzaGate

> Analysis of demographics patterns of COVID-19 misinformation on Twitter using linear regression, with dataset collection and experiments done with **Python** and **MySQL**.

Skills

Languages: Go, Python, TypeScript, JavaScript, Java, C, C++, Julia, Lisp.
Web Frameworks: React, React Native, SASS, Node.js, Next.js.
Technologies: MapReduce, Kafka, SQL, GraphQL, Kubernetes, Docker, PyTorch, TensorFlow, Jenkins, Git, Jira, Unix.