Ted Chang

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Education

2017-2021 **Brown University**, *Computer Science (BS), Economics (BA)*, GPA: 3.8/4.0.
Relevant Coursework: Intro O/O Programming, Data Structures and Algorithms, Modern Web Applications, Database Management Systems, Computer Systems, Statistical Probabilities and Inference, Linear Algebra, Machine Learning, Software Engineering

2013-2017 **Hamilton Regional High School**, *GPA 4.42*, Salutatorian.

Work Experience

June - August 2019 **Spell**, *Software Engineering Intern*.
Worked on data pipeline for machine learning infastructure. Created user facing command line tools and Web UIs for new product features

- Produced new channels in Golang pipeline to process machine learning models sent in docker images via AWS machines. Channel reads model metrics (e.g tensors and keras) during training, and stops training based on user inputted metric conditions.
  - Utilized multi-threaded goroutines and in-memory-caching to efficiently handle 1500+ simultaneous requests under stress tests with virtually no drop in performance
- Created web tool in react to allow users to view the requests and resources previously sent through pipeline.
  - Utilized redux to make asynchronous fetches for user data. Produced details page in react to visualize received data. Additionally developed nested table component to help with data visualization, now used throughout the site.

June - August 2018 **Applied Materials**, *Software Engineering Intern*.
Developed API that ETL'd data from internal requesting service and created web application on company intranet utilizing it

- Constructed RESTful API in C# (using .NET framework) that pipelines data containing incoming customer requests for engineers. Deployed on with node on internal server.
  - Performed table relation optimizations to decrease DB latency time by 20%
  - Serves 300 QPS on startup of API. Utilized in-memory byte caching to further decrease request latency by 70% to an average of 110ms per request
- Utilized API to created web client in javascript that allowed engineers to view and update existing requests or create new ones
  - Also released NuGet package into company's intranet, allowing other engineers use aspects of the API's functionality for future projects

May - August 2017 **Applied Materials**, *Platform Physics Department*, Summer Intern.
Improved upon simulation of new ion implanter by assisting with development of machine learning software.

- Utilized sklearn to impelement convolutional neural network to assist in findoing tuning solutions for ion implanters. Software had a 75 percent accuracy on testing data for finding perfect tuning solution, and 90 percent accuracy finding solution within acceptable ranges.
- Automated data processing by writing Matlab scripts that performed statistical calculations on inputted machine data

Skills

Languages: Proficient in Java, Python, C, C#, SQL, JavaScript, HTML/CSS, Golang
Technologies: Experienced with .NET, ORM, MongoDB, SQL, REACT,Redux, Ruby, AWS, GCP, Docker

Interests and Extracurriculars

BEST: Member of Brown Esports (BEST) League of Legends and Hearthstone teams
USAPL: Competitor in 74 kg class of USA Powerlifting Federation
Hobbies: Cooking, swimming, trading card games, anime, exercise science, stand-up comedy