Tate Larkin

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Developer with a passion for Full Stack Web Development, Machine Learning, and Data Science. Driven to succeed, learn new skills and contribute to organizational success.

Work Experience

Software Development Contractor   **Fresh Consulting** - Seattle, WA   **June 2022 - January 2023**

- Worked directly with the CTO of Fresh Consulting to define parameters, develop an appropriate database schema, and code a Chrome Extension to manage employee SaaS subscriptions by parsing their websites for user emails
- Reduced company spend on unnecessary subscriptions and improved user compliance
- Continued work with the CTO to publish a second major release with active use managing 3600+ user accounts on 90+ SaaS sites across the organization
- Securely stored data inside Firebase RTD with UI inside the extension to efficiently manage the data
- Implemented seamless OAuth 2.0 authentication for Google and other providers
- Integrated the extension with Google Workspace using the Google Directory API
- Worked in a CI environment with Bitbucket Pipelines using linting via ESLint and testing via Jasmine

Selected Projects

AI Powered Flashcards Website - [Github](https://github.com)

- Created a website to help young kids studying basic vocabulary by detecting images drawn on the site UI
- Developed a ResNet architecture neural network with Nadam optimization using Tensorflow and Keras
- Optimized the "messy" (10% bad labels) dataset by removing bad training examples using anomaly detection in a reduced dimensionality space. This increased base accuracy by ~5%
- Trained the model on ~50 million images with 346 unique classes
- Achieved 92% accuracy on test data, when top 5 predictions considered

Neural Machine Translation Website - [Github](https://github.com)

- Used a Transformer model to perform English-to-Spanish translation in a chat style website
- Achieved 80% accuracy on inputs with <100 words
- Developed a multi-threaded web server to serve the website

Technologies and Languages

- Languages: Python, Java, Javascript, HTML, CSS
- Data Science / ML: Tensorflow, Keras, Scikit Learn, Numpy, Pandas, Matplotlib
- Database Management: MySQL, Firebase
- Web Development: React, Node, Express, Flask, Chrome Extension API
- Other: Git, OAuth 2.0, Jasmine

Education

- **University of Utah** concurrent enrollment   **Fall 2022 - Spring 2023**
  - Coursework includes CS 2420 - Intro Algorithms and Data Structures - top 5 algorithm run time in 300+ person class on final assignment, MATH 2210 - Multivariable Calculus, MATH 2270 - Linear Algebra
- **Skyline High School**   **Expected Graduation 2023**

Additional Information

- 2nd place finisher at Utah Technology Student Association State Competition in Software Development
- Placed 16th in 2021 and 19th in 2022 in the U.S. Mountain Bike National Championships