Tate Larkin

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

Work Experience

CEO/Founder　　　　　　　　　　**BitBlink Solutions** - SLC, UT　　　　　　　　**July 2023 - Present**

- BitBlink Solutions is a technology consulting firm providing full stack capabilities for custom software, AI/ML and digitization services
- Engaged by Dirty Dog's Car Wash, an Atlanta based, private equity backed operator for the de novo build of their proprietary customer engagement and membership app
- Integrated with multiple systems including billing, client CRM and back office to provide a seamless end-user 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

- 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

Technologies and Languages

- Languages:　　　　　　　Python, Java, Javascript, Typescript, 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
- Mobile Development:　　　React Native, Expo, MobX
- Other:　　　　　　　　　Git, OAuth 2.0, Jasmine

Education

- **University of Utah**　　　　　　　　　　　　　　　　**Expected graduation May 2026**
  - Coursework includes CS 2420 - Intro Algorithms and Data Structures, MATH 2210 - Multivariable Calculus, MATH 2270 - Linear Algebra