

Joshua Loehr

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EDUCATION

Western Washington University, Bellingham, WA

B.S. Computer Science – June 2018

B.S. Mathematics – June 2018

Current GPA: 3.86

HIGHLIGHTED PROJECTS

LiftJL – Exercise Tracking PWA (github.com/joshualoehr/exercise-app)

A small exercise tracking app, leveraging React/Redux and MaterialUI. Designed as mobile first, offline capable via IndexedDB. Backend Flask API for syncing across devices available at github.com/joshualoehr/exercise-app-server

AuthJL – Identity Provider (github.com/joshualoehr/auth-server)

(WIP) My attempt to build my own IdP following OAuth/OIDC protocols. Frontend login widget built with Vue.js available at github.com/joshualoehr/auth-client

Starter-kit (github.com/joshualoehr/starter-kit)

Minimalist Javascript development environment starter kit. Inspired by create-react-app, but leaner, built from scratch, and tailored to my own preferences. Used to start my LiftJL project.

React Map Demo (github.com/joshualoehr/starter-kit)

Simple React app demoing how to mount an interactive map with free-drawing capability.

Live Demo: <https://react-freedraw-map.azurewebsites.net/>

EXPERIENCE

Software Engineer II (Full Stack)

June 2018 – Present

Emergency Reporting – Bellingham, WA

- Update/maintain legacy monolith (Classic ASP, PHP, JavaScript, JQuery, React, T-SQL).
- Overhauled authentication platform-wide, replacing the homegrown OAuth service with an integration to cloud-based solution Azure AD B2C. This involved architectural design, planning, creation of new frontend workflows, significant backend refactors, and extensive cross-departmental collaboration.
- Created new modules and applications, using primarily React/Redux, PHP, and T-SQL.
- Led the initiative to introduce the practice of writing snapshot tests for all new React code, significantly reducing defects from changes to common components.
- Developed BASH and Powershell internal tools to e.g. automatically update Azure DevOps tickets when CI/CD completes successfully.
- Co-created a .NET Core 3 ETL pipeline for a customer to securely and regularly ingest data directly from the SQL Server database.
- Operated within a high-availability, compliance-focused environment.

Deep Learning Research Assistant

September 2017 – June 2018

Western Washington University – Bellingham, WA

- Explored unsupervised deep learning methods for insider threat detection using large data streams.
- Created and worked with existing BASH/Python scripts to facilitate data preprocessing, and TensorFlow for model training and evaluation.

Software Development Intern

February 2017 – September 2017

SparkCognition – Austin, TX

- Scripted a web scraper to download hundreds of thousands of sample Android APK files for use in malware classifier training.
- Created a pipeline of BASH/Python scripts to extract features from samples and train

new classifiers for detecting malware, using Apache Spark on YARN in a distributed Google Cloud cluster.

- Decreased runtime by ~66%, and allowed for training on the full 65 TB training set.

Web Application Developer

May 2016 – February 2017

ResTek (WWU University Residences) – Bellingham, WA

- Collaborated on an Agile team of developers to maintain and expand a multi-project Django application comprising the entirety of the university's housing website
- Spurred the initiative to add unit and functional tests to the existing legacy code base, reducing technical debt and speeding up new development

Software Engineering Intern

July 2015 – December 2015

Spredfast – Austin, TX

- Developed a new internal tool using NodeJS to automatically and regularly prioritize bug tickets in JIRA using customer details in Salesforce.
- Created a NodeJS library to abstract Spredfast's customer-facing RESTful API, which also now serves as API documentation for 3rd party developers.

OTHER ACTIVITIES

WWU Rock Climbing Team (Fall 2015 – Present) | Team Captain (Fall 2017 – Present)

Webmaster, WWU Association of Computing and Machinery (Fall 2014 – Fall 2016)