Joshua Loehr

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EDUCATION

Western Washington University, Bellingham, WA
B.S. Computer Science – June 2018
B.S. Mathematics – June 2018
GPA: 3.89

SKILLS

Languages: C#, PHP, TSQL, Java, Python, JavaScript, TypeScript, HTML, CSS, BASH, PowerShell
Technologies: Azure (functions, web apps, storage accounts, B2C identity management), .NET Core, ASP.NET, .NET Entity Framework Core, Flask, React, Redux, Webpack, Babel, Jest

HIGHLIGHTED PROJECTS

N-gram Language Model Sentence Generation (github.com/joshualoehr/ngram-language-model)
Python implementation of an N-gram language model with Laplace smoothing. Generates random sentences in the style of the corpus on which the model is trained.

LiftJL – Exercise Tracking App (github.com/joshualoehr/exercise-app)
A small exercise tracking app, leveraging React/Redux and MaterialUI. Designed as mobile first, offline capable via IndexDB. Backend Flask API for syncing across devices available at github.com/joshualoehr/exercise-app-server

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.

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 UI/UX, 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 BASH/Python scripts to facilitate data preprocessing, and NumPy/Pandas/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 – June 2018)
Webmaster, WWU Association of Computing and Machinery (Fall 2014 – Fall 2016)