Luke **Weber**

Computer Scientist & Entrepreneur

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Python | Java | C/C++ | C# | JavaScript
Android | ARM | Arch Linux | Bash | Vim
Machine Learning | AI | SQL

Education

Washington State University

B.S. Computer Science

Pullman, WA
August 2013 – May 2017

- Honors: *Cum Laude* (GPA 3.7/4.0) and President's Honor Roll (6x).
- Relevant coursework: *Machine Learning, *Structured Prediction, Artificial Intelligence, Operation Systems, Engineering I/II, and Databases.

* *Graduate-level course*

Experience

Co-Founder & Chief Technology Officer

BreatheFIT @ BreatheFIT.co

Seattle, WA
February 2017 – PRESENT

- Started (and currently building) health and fitness company with two co-founding bioengineers to combine wearables with our breath-based sensor tech to create a portable metabolic tracker and AI health coach — targeting type-1 and type-2 diabetes as well as professional athletes.
- Synchronized and parsed UART serial data via Arduino board (attached to gas sensor) in C++ and transmitted data through BLE to Android app for Venture Capitalist product/hardware demos.
- Built additional demos for Windows desktop environment using serial port and a pretty Processing interface for displaying data and formulas.
- Competed in startup competitions and attended many health and tech events to grow connections with industry professionals and VCs valued up to $500 million, collecting many business and tech mentors along the way.

Research Assistant & Mobile Android Development Intern

Department of Civil & Environmental Engineering @ WSU / GitHub / Google Play

Pullman, WA
May 2016 – PRESENT

- Led and directed mobile app team under AIRPACT-Fire initiative for estimating air quality from smartphone cameras.
- Handled obscure and generic product requirements to build entire app UIX,
- Built interface for dynamically creating posts based on the user-selected image algorithm, in addition to an image gallery, automatic background posting of queued posts, and a user data analysis activity with graphs and maps of posts.
- Designed app as client to Python Django server backend — submitting posts, authenticating users, recording server algorithm output, etc.
- Modelled and built custom application, server, and database management suite to sync with activity lifecycle and decouple app management code from activity-specific work; developed interfaces for future developers to create and use new managers as they please.
- Facilitated database migration from SQLite to Realm and optimized to perform ~3x faster on most common tasks, e.g. submitting a picture.
- Carried out alpha testing to government users and wrote user documentation/tutorials (for app and website) in addition to bringing code organization and documentation to industry standards.

Undergraduate Researcher

Department of Electrical Engineering & Computer Science @ WSU / GitHub

Pullman, WA
January 2017 – May 2017

- Developed Deep Learning model and Python/Java scaffold for automated task-assignment system AgiPal helping developer teams which follow Agile methodologies (e.g. SCRUM) and use Git as their VCS.
- Worked under advisor Jana Doppa, Ph. D, and co-advisor Venera Arnaoudova, Ph. D, in collaboration with the SaaS Club at WSU.

Projects

FakeFews

Web App & Chrome Extension @ Chrome Web Store / GitHub

Pullman, WA
February 2017 – May 2017

- Trained fake news classifier in Python using Bayesian methods with bag-of-words representation for features parsed from article links, thus learning the combination of tokens which contribute to suspicious URLs — achieved 95% testing accuracy (via k-fold cross-validation).
- Ported our machine learning model (hosted on AWS) to classify Facebook posts via Chrome extensions, manually compiling 100+ base training examples in addition to crowdsourcing further training data through feedback mechanisms manually embedded into Facebook posts.
- Built as lead of four-person team for 2017 Crimson Code hackathon @ WSU in under 36 hours (made finals).

MathTrip

JavaScript Engine & Processing Simulation @ GitHub

Ellensburg, WA
December 2014 – January 2015

- Built Newtonian physics engine in JavaScript using ProcessingJS visualization library and jQuery — rendered 3D objects in 2D space.
- Harmonized celestial bodies (planets, asteroids, spaceships, and stars) with orbital mechanics, collision detection, jet propulsion, etc.

15+ additional projects | Competed in 4 hackathons (finalist in 2) and 1 startup competition | Programming for 7 years | 3 MTA certifications