Lucas Glenn Weber

Entrepreneur, programmer

Location	Berlin, Germany
Nationality	American
Age	28
Website	lkwbr.com
Email	lkgwbr@gmail.com
WhatsApp	+1 (916) 799-4473

Personal Statement

I'm interested in making machines that can think, and solving high-impact, real-world problems along the way.

Work Experience

Jan 2023 - Jun 2023

Senior Engineer *Berlin, Germany*

Brighter AI

- Engineered a secure, Azure-based IoT data streaming and analytics platform, implementing ML deanonymization pipelines (Terraform, Kubernetes). This bespoke platform, designed and built to meet specific client needs, is being deployed to a high-profile client with 56B € in revenue.
- Developed modular batch-submissiong and stress-testing package, producing insights in cost, compute underutilization, scalability, and speed.
- Improved fair request scheduling for all clients by reducing wait times 10x; implemented corresponding test suite.
- Spearheaded creation of concrete roadmap for v2.0 of backend.

Feb 2020 - Mar 2021

Co-founder and Chief Engineer *Seattle, WA*

Omic, Inc.

- Co-designed and deployed collaborative AI platform to support the treatment of 7,000+ human diseases, using multi-omics data and ML (AlphaFold, DRL, CNNs, GANs, BERT) for small-molecule drug discovery.
- Invented portable workflow engine integrated with UI, serverless backend, and knowledge graph (KG), responsible for processing workloads up to approximately 15 TB/week.
- Constructed 1B+ node KG fed by processed and integrated scientific articles and biological + clinical data—served as central DB for continuous data insertion and knowledge mining.
- Led teams of 12+ specialized biologists, full-stack engineers, data scientists, and web designers on 25+ bioinformatics and AI projects (all executed on our platform).
- Facilitated product demos to clients and partners with collective market cap of over $350B.
- Was instrumental in the ideation and execution of over 200 high-impact scientific and product features.

Apr 2019 - Feb 2020

Research Scientist *Seattle, WA*

Omic, Inc.

- Co-developed pharmacogenomics pipelines + personalized patient health and wellness reports.
- Increased development speed 3x by implementing stable test/production environments.
- Programmed rapid-fire prototypes, including:
    (1) DNA file compression,

(2) a deep reinforcement learning (DRL) and KG-based search engine, and
(3) a clinical patient cost-spike prediction deep learning model (~.72 AUROC).

- Designed and built state machine-based conversational assistant for doctor-facing product.
- Built immunotherapy efficacy assessment pipeline for somatic cancer tissue genomes.

Sep 2018 - Apr 2019

Research Engineer *Seattle, WA*

Vizinet

- Developed CNN model to predict Air Quality Index (AQI) to reduce reliance on $10k+ hardware sensors.
- Prototyped webcrawler with ~20K images retrieved of worldwide public and scientific webcams, image galleries, and $PM_{2.5}$ sensors. (Another 30.1K retrieved through audit.)
- Directed pre-production testing with 14 academic, government, and lay users.
- Productionized website and app with dozens of fixes and usability redesigns from user feedback.

Dec 2017 – Sep 2018

Software Engineer, Contract *Redmond, WA*

Microsoft Corp.

- Maintained and contributed to privacy-critical codebases which processed petabytes of data within Azure.
- Top technical contributions:
  (1) wrote package for processing 2M+ daily data requests,
  (2) wrote entire team's test infra,
  (3) wrote scripts for weekly hard-deletes on 2B+ bytes of data,
  (4) optimized processing of user requests by 10x,
  (5) built APIs used by over 1K Microsoft Service Teams, and
  (6) built delete request tracking service to process data 32x faster.
- Resolved high-severity incidents with internal project managers (e.g., from Xbox, Skype) and senior staff.

Jan 2017 – May 2017

Undergraduate Researcher *Pullman, WA*

Washington State University, Department of Electrical Engineering & Computer Science

- Developed conceptual framework and prototype of AI task assignment system for developer teams using SCRUM and Git, learning developer-task fit.
- Worked under advisor Jana Doppa, Ph. D, and co-advisor Venera Arnaoudova, Ph. D, in collaboration with SaaS club at WSU.

May 2016 – Aug 2016

Software Engineer, Intern *Pullman, WA*

Washington State University, Department of Civil & Environmental Engineering

- Co-created scalable computer vision platform in predicting AQI ($PM_{2.5}$), in the study of the relationship between $PM_{2.5}$ (induced by wildfires) and visibility via images.
- Developed Android app for crowdsourcing researchers to submit image, sensor, and observational data.

Jan 2013 – Mar 2013

Software Engineer, Consultant *Ellensburg, WA*

Central Washington University, Central Access

- Developed multi-platform desktop application to help learning-disabled students read 50+ textbooks.
- Utilized PDF2text conversion to simplify display by near ⅔ for dyslexic, ADHD, and far-sighted users.
- Implemented text-to-speech feature for ADHD and blind users.

Jul 2012 - Aug 2012

Software Engineer, Consultant *Ellensburg, WA*

Jim Caputo, Engineering Director @ Google

- Created mobile-first web app on Google App Engine for reporting accurate weather data to recreational Mount Baker visitors.
- Parsed, stored, queried, and ran analysis on 1M+ weather data points (XML) from NOAA with Java Server Pages, MySQL, and GCP.

Education

Aug 2013 – May 2017

B.S. Computer Science *Pullman, WA*

Washington State University

Associations, Awards, and Certifications

Graduate in Deep Reinforcement Learning Nanodegree, *Udacity* *Feb 2019*

Graduate in Flying Car and Autonomous Flight Engineer Nanodegree, *Udacity* *Aug 2018*

Graduate in Deep Learning Specialization, *deeplearning.ai* *Jan 2018*

Finalist at CrimsonCode, *Washington State University* *Mar 2017*

- Facebook fake news classifier using Bayesian classification—achieved 95% testing accuracy.

***Cum Laude* (3.7/4.0 GPA)** in Computer Science, *Washington State University* *May 2017*

Dean's List (6x) at *Washington State University* *Jun 2015 - May 2017*

Finalist at CrimsonCode, *Washington State University* *Mar 2015*

- Chatbot serving natural language queries from web definitions to directions to movie showtimes.

Skills

Deep Learning (Attention Networks/CNNs/GANS/DRL)
Bioinformatics (AlphaFold/NextFlow/WDL)
Mobile App Development (Android)
Embedded Systems (ARM)
Software Architecture
Product Design
Public Speaking
Technical Writing
Automated Driving and Flying Systems

Python (Numpy/TensorFlow/PyTorch/Pandas/Seaborn)
JavaScript (React/Angular/Node/jQuery)
Cloud Computing (AWS/GCP/Azure)
Secondary languages: *Java, C#, C/C++, Julia*
IaC (Terraform, CloudFormation)
Batch Processing
(WDL/Nextflow/Airflow/Docker/Kubernetes)
Linux/Unix (Bash/Vim/TMUX)
Databases (MongoDB/MySQL/Neo4J/Grakn/Redis)

Interests

Artificial General Intelligence
Automated Robotics
Computational Omics
Computational Neuroscience
Brain-computer Interfaces
Augmented Reality

Languages

English, *Fluent*
German, *Intermediate*
Spanish, *Basic*