

# Keaton Armentrout

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Seattle, WA

## Experience

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Concerto Biosciences · Remote

*Director of Engineering*

May 2022 – Present

*Lead Data Scientist*

May 2021 – May 2022

- Built the Data & Software team from the ground up as the first engineering hire and second employee; hired and led a cross-functional team spanning data science, ML, data engineering, and image processing.
- Designed and implemented the image processing and data storage pipeline for high-throughput microscopy data, bringing it from local implementation through to automated, scalable, serverless AWS deployment.
- Executed the full data analysis processes to identify ENS-002, Concerto's lead microbial therapeutic for atopic dermatitis, currently in Phase 1 clinical trials.
- Enabled self-serve data access for scientists via automated QC reports and web apps for experiment tracking and results visualization, allowing for quick feedback cycles and early error detection.
- Led development of a machine learning model predicting microbial community behavior from high-throughput screen data; integrated bioinformatics data for modeling of each microbe.
- Hired, mentored, and promoted engineers on a fully remote team; set goals on quarterly, annual, and multi-year bases; established team-wide software and documentation standards.
- Currently run the full software platform and data analyses as the sole engineer following company restructuring.

10x Genomics · Remote

Dec. 2020 – May 2021

*Engineer 3*

- Maintained a widely-used internal tool for experiment tracking, written in Go and React.

ReadCoor · Cambridge, MA

Feb. 2018 – Dec. 2020

*Software Engineer*

- Created a DNA probe design pipeline using Python and Nextflow to generate unique, gene-specific barcoded DNA probes for R&D.
- Built database and API systems using Flask and PostgreSQL, deployed on AWS.
- Developed and implemented algorithms for image registration and DNA base-calling from image features.
- Designed a benchmarking tool to assess algorithm performance of the image processing pipeline over parameter sweeps.
- Led multiple small teams to create and deploy frontend and backend components for probe design software and complete image annotation tasks.
- Wrote documentation and packaged tools for handoff following acquisition by 10x Genomics.

Apex Neuro · Cambridge, MA

Jul. 2017 – Feb. 2018

*Biomedical Engineer*

- Worked as the sole software engineer to design and build data infrastructure using PostgreSQL and Tableau to handle batch biometric data.
- Led data analysis of biometrics and questionnaire responses from human studies to assess efficacy of a noninvasive nerve stimulation device.

Techstars Boston · Boston, MA

Jan. 2017 – May 2017

*Data Science & Tech Associate*

- Performed data analytics and software development projects for early-stage startups in the 2017 cohort.
- Created and deployed an automatic scheduling bot to organize 350+ meetings a week across 24 teams.

Miguel Nicolelis Neural Engineering Lab · Durham, NC

Sep. 2015 – Dec. 2016

*Research Assistant*

- Built a predictive model of bilateral leg motion from *in vivo* primate cortical neuron activity for potential brain-machine interface applications.

# Publications & Patents

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## *Preprint*

“Systematic discovery of a topical bacterial consortium that targets *Staphylococcus aureus* to treat atopic dermatitis”

Co-Author · Published Feb. 2026 · [doi.org/10.64898/2026.02.13.705787](https://doi.org/10.64898/2026.02.13.705787)

## *Patent US-12115197-B2*

“Microbial compositions for the treatment of skin diseases”

Co-Inventor · Issued Oct. 2024

# Education

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## *M.S. in Biomedical Engineering*

Duke University, Durham, NC · Dec. 2016

## *B.A. in Neuroscience, Minor in Music*

Washington University in St. Louis, St. Louis, MO · May 2015

## *Affiliate Student, Biosciences*

University College London, London, UK · Jan. – Jun. 2014

# Volunteering

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NE Seattle Tool Library, Seattle, WA

## *Steering Committee Member*

Apr. 2026 – Present

## *Volunteer*

Aug. 2025 – Present

- Member of the Steering Committee overseeing Tool Library governance
- Staff the front desk, checking out tools to members and contributing to library upkeep and tool repair

NeuroTechX, Cambridge, MA

Aug. 2017 – Jan. 2019

## *Editor, Writer, Organizer*

- Writer and Editor of the “New Emerging Tech” and “Machine Learning for BCIs” content for the NeuroTechEDU open education platform
- Organized speaker events and Hack Nights for NeuroTechBOS, the Boston chapter of NeuroTechX with over 750 members