Bailey Wickham

View at baileywickham.com

Experience

08.2023 – Present

Console, Founding Engineer

Founding Engineer at an early stage startup funded by Thrive cap. Working on everything from core AI features to the platform. Scaled platform from 0 to many customers and 10k+ users. Worked with customers to close individual deals.

Designed novel AI interaction patterns for the use case, including Playbooks allowing users to reference tools and resources inline. Developed main agentic workflow for the IT use case.

Designed and developed core data ingest platform, scaled to 1m plus records per ingest across multiple data providers and customers.

Designed RAG and search pipeline from scratch including understanding and implementing the state of the art.

12.2022 – 9.2023
10 months

Metaculus, Software Engineer

Worked at early stage startup that built a forecasting platform. Built out core features of the platform, including Search and Achievement features that drove user growth.

Designed and developed API client for interacting with Metaculus API. Built out API endpoints for new features.

01.2021 – 07.2022
1 year, 6 months

Amazon, IPX Team

Remote/SLO, CA

Junior Developer at Amazon SLO on Indie Publishing Experience team responsible for the publishing workflow for KDP authors. 20h per week October-June, 40h per week June-September. Fully remote position for first year, hybrid for second. Declined FTE offer.

Built internal tools to simplify developer experience. Built tree visualization tools for store data. Developed DSL for querying book location on Amazon store.

Worked on team of three to decide infrastructure path forward for team. Led major infrastructure choices for medium scale component. Led initial planning and development of said component, including CI/CD, designing APIs, integrating with other services through custom DSL.

Summer 2020 –
Winter 2021

Frost Undergraduate Research (Poster)

Frost Research, Cal Poly

Participated in undergraduate research in Pure Mathematics under Dr. Eric Brussel. We studied a moduli space of embeddings of complex planes into the quaternions. We then generalized our approach over the generalized quaternions, classifying the embeddings of commutative subalgebras, related affine varieties, and conjugacy classes. We also studied H from a category theoretic perspective. Paper in progress.

09.2018 – 12.2020
2 years, 3 months

Cal Poly CubeSat Lab

PolySat, Cal Poly

Mission Lead of ExoCube II (Spring 2019-Summer 2020), a 3U small satellite as part of NASA's ELaNa XX program. Led team of ~20 through build, testing, and predelivery phase of the spacecraft. Worked with NASA Goddard, Virgin Orbit, TriSept to organize delivery of spacecraft. Mission funded by NASA, NSF.

ExoCube II successfully launched on Virgin Orbit Q1 of 2021. Worked with current mission lead during initial acquisition and operations.

Led development and deployment of CPCL infrastructure to AWS (~5 machines). Wrote Cloudformation templates, ansible scripts to manage deployment. Deployment met Cal Poly IT security standards.

Developed Embedded Flight Software for CPCL including commits to buildroot, IPC library, beacon and XDR parser.

Education

09.2018 –
06.2022

California Polytechnic, SLO

BS in Mathematics, BS in Computer Science

Contact

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PGP Keys

Personal

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Github: baileywickham
Running, Surfing

Publications

I. Gallagher, A. Hasse, B. Wickham, E. Brussel. Poster at MAA Golden Session *Spheres of Planes in the Generalized Quaternions*

- BS in Mathematics (Pure focus), BS in Computer Science, 3.56 GPA
- Minor in Chinese (two years of language courses)
- Graduate courses in Field Theory, Point-Set Topology, Algebraic Topology, Programming Languages

Received Frost funding Spring, 2022 to research Version Space Algebras under Dr. Robert Easton in the Mathematics department.

Worked with Masters student under Dr. Theresa Migler to characterize power networks from a graph theoretic approach. Studied graph networks and built a framework for ingesting data.

Attended Simple Group, a research seminar with a focus on algebraic topics.

Attended programming languages reading group under Dr. John Clements and Dr. Aaron Keen. Discussed current topics in programming languages and type theory.

Side Projects

fuzzer `Go`

A markov chain based fuzzer written in Go which generates new data based on an input corpus to test applications. Supports multiple markov chains and test corpuses in parallel.

dns `Rust`

A small dns client written in Rust. Written to experiment with Rust and DNS standards.

PrettyCities `Python/Tensorflow/Keras`

Use Keras and Google maps API to try to generate predictions about how pretty a city is.

More on Github