Riley H. Grant

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EDUCATION

NORTHEASTERN UNIVERSITY

M.S. in Computer Science
Sep. 2020 - May 2022 | Boston, MA
Breadth in Systems and Software
Breadth in AI and Data Science
Cumul. GPA: 3.88 / 4.00

B.S. in Civil Engineering
Sep. 2015 - May 2020 | Boston, MA
Magna Cum Laude, Dean's List
Minor in Computer Science
Minor in Mathematics
Cumul. GPA: 3.77 / 4.00

LINKS

GitHub:// **rileyhgrant**
LinkedIn:// **rileyhgrant**
https:// **rileyhgrant.com**

SKILLS

PROGRAMMING

Strong:
React • TypeScript • Python
Docker • Kubernetes • GCP
Django Rest Framework • Node
Git • Shell (zsh) • CI/CD • GraphQL
Jest • Terraform (zsh)
Familiar:
Rust • R • PostgreSQL
C • LaTeX • Redis • Java
Go • Argo • Helm • C++

COURSEWORK

GRADUATE

Building Scalable Distributed Systems
Database Management Systems
Machine Learning
Foundations of AI
Programming Design Paradigms
Web Development
Mobile App Development

UNDERGRADUATE

Object Oriented Design
Algorithms and Data
Probability and Statistics

INTERESTS

Ultramarathons • Backpacking
Jazz • Biking • Cooking

PROJECTS

GNOMAD BROWSER | React, TS, Python, GKE | GitHub

Jul. 2022 - Present | Project at Broad Institute

- Open Source, Open Access data browser with 300,000+ views per month
- Balancing features, architecture improvements, bug fixes, and maintenance
- Web App with React, TypeScript, Node.js, GraphQL, Elasticsearch, Redis, Nginx
- GKE and Terraform for deployment, Python for data pipelines, GitHub for CI

GENIE | React, TS, DRF, GCP | GitHub

Nov. 2023 - Present | Project at Broad Institute

- App that lets users curate variant lists for rare inheritable diseases
- React for Frontend, Django (DRF) for Backend, Postgres for DB
- Python Webworker processes requests in Hail, utilizes Pub/Sub
- Python, Hail, GCloud Build for data pipelines, GCloud Run for deployment

EXOME RESULTS BROWSERS | React, JS, Node, GKE | GitHub

Dec. 2023 - Present | Project at Broad Institute

- Framework for case-control association browsers, standard but flexible
- Working with Data Analysts and stakeholders to iterate, update, and improve
- Hail pipeline, variable data handoff format, lightweight datastore, GKE

ADVENT OF CODE 2024 | Rust | GitHub

Dec. 2024 | Personal project

- Solved both parts of all 25 days of Advent of Code (AoC) 2024
- Overcame challenges in theory and implementation while learning Rust
- Improved performance with algorithms and data structures as needed

ALPHAZERO RESEARCH | Python, Tensorflow, OpenSpiel

Jan. 2022 - May 2022 | Master's Research

- Worked with Professor Karl Lieberherr and the AlphaZero AI Algorithm
- Expressed items in Recursive First Order logic to train a Neural Network
- Used Monte Carlo Tree search alongside Evaluation Metrics for early pruning

EXPERIENCE

THE BROAD INSTITUTE | Software Engineer

Jul. 2022 - Present | Primarily Remote (Boston, MA)

- Full Stack Developer in Heidi Rehm's lab, rapidly improving domain knowledge
- Balancing deadlines on many concurrent projects, prioritizing as appropriate
- Collaborating with many professions, effectively communicating requirements
- Developing free resources for disease research: **gnomAD**, **GeniE**, **ERBs**, **VCP**

CODE FOR BOSTON | Web Developer - Volunteer

Jan. 2021 - May 2021 | Boston, MA

- Collaborated with Developers, Law Students, Client, and Users
- Developed a Full Stack Web App using Next.js, React, Node.js, and Leaflet

CONTINENTAL DIVIDE TRAIL | Thru Hike

Apr. 2021 - Sep. 2021 | Mexico to Canada

- Achieved goal of hiking the challenging 3,100 mile long CDT, following the Rocky Mountains from Mexico to Canada through NM, CO, WY, ID, and MT
- Overcame frequent adversity including weather, terrain, injury, and reroutes