Alexander Williams

https://alexanderwilliams.dev
https://github.com/williamsalex
https://linkedin.com/in/alex-williams-dev/

williams_alex@pm.me
+1-646-620-5398
Brooklyn, NY

SKILLS

- **Languages**: Javascript, Python   **Technologies**: Node.js, GCP, noSQL, SQL, Firebase, Flask

EXPERIENCE

- **RentRedi** *high-growth property technology startup* — New York City, NY
  Software Engineer — *Sep. 2021 – Present*
    - **Backend Development**: Switched payment processors without downtime while handling tens of millions of dollars per month. Designed and built most-requested feature, an auto-notification system which serves 20,000+ users daily.
    - **Reliability and Scaling Improvements**: Re-architected ETL pipeline to reduce dropped event count from 50,000+ a month to zero. Built API that increased batch operation dispatch capability from 40,000 to 3,000,000 jobs across all systems while reducing coupling and increasing fault tolerance.
    - **Data Operations**: Built company-wide Python data analysis and forensic accounting toolkit and ran all data analyses for 12M Series A funding round. Sped up critical data export by more than 99%. Created self-serve terminal for non-technical employees to run complex data operations, reducing turnaround time by 90%.

- **BetterYou** *award-winning wellness startup* — Saint Paul, MN
  Backend Software Engineer — *Sep. 2020 – Sep. 2021*
    - **Backend Scaling and Restructuring**: Expanded and refactored a serverless, microservice Node.js GCP backend. Reduced costs in the highest traffic system by more than 97%. Transitioned half a dozen live user-facing systems from Firestore to Realtime Database with no downtime.
    - **Backend Development**: Built decentralized relational cross-platform multi-database social network using Cloud Tasks, PubSub and Firestore. Created business-facing data marts that reduced skilled, manual, mission-critical workload by 75%. Improved engagement with critical coaching feature by more than 20%.
    - **Frontend Development**: Built 1/3 of a ground-up rebuild of multiplatform React Native app.
    - **Data Systems**: Ran ad-hoc Python analyses for business and data science teams and built ETL pipelines.

- **Northeastern University Mathematics Department** — Boston, Massachusetts
  Algorithmic Researcher — *Feb. 2019 – Jan. 2020*
    - **Research**: Studied complex analytic singularities using Python, Sage MATH and Singular. Decreased solving time in 3 - 5 dimensions from on average 10 minutes to 5 seconds, increasing sample size 10000x. Invented and deployed highly parallelizable algorithm on a centOS compute cluster using slurm.

EDUCATION

- **Flatiron School** — New York City, New York
  Full Stack Software Engineering — *Nov. 2019 – Mar. 2020*

- **Northeastern University** — London, UK and Boston, Massachusetts
  Computer Engineering, Math & Physics - 85 credits completed, dropped out. — *Sep. 2018 – Apr. 2019*

- **Bard Queens** — New York City, New York
  AA degree completed during high school. Took OOP and Python with Linear Algebra. — *Sep. 2016 – Jul. 2018*

PROJECTS

- **Cruze** — New York City, NY
  Won 1st Place Health & Sustainability and Best Sports Hack at NYU's 184 person hackathon — *Mar. 2020*
    - Algorithm to increase cyclist safety using weighted routes determined via infrastructure data from NYC Open Data with React frontend: Link to project page.

- **DirExit** — Philadelphia, PA
  Won 1st Place and Best Data Analysis from Lockheed Martin at Drexel's 174 person hackathon — *Feb. 2020*
    - Raspberry-pi emergency sign, intelligently routing evacuees to exits. Designed pathing with backtracking and lossy compression algorithms in Python: Link to project page.