# Akilesh Praveen

Email: akilesh.praveen@gmail.com | LinkedIn: https://www.linkedin.com/in/akipraveen/ | GitHub: https://github.com/AkiPraveen

## Education

**University of Maryland, College Park (College Park, MD)** - **B.S. Computer Science**                **Dec 2021**
Notable Coursework: Distributed Systems (Graduate level), Parallel Programming, Advanced Data Structures, Algorithms

## Experience

### Founding Software Engineer @ Stealth Startup                **Oct 2022 - Present**
*Fullstack engineer at a 5 person startup- rapidly building features to achieve product-market fit.*
- Learned new stack: **NestJS**, **Prisma**, **PostgreSQL** & **Apollo GraphQL** & shipped multiple robust backend features with third-party integrations, while data model & specification changed rapidly prior to first deal closing
- Rapidly shipped complex frontend features using **ReactJS, Redux** and **MaterialUI**, deployed on a **NextJS** frontend. Wrote first **Cypress** tests at the company to ensure quality of these deliverables
- Projects include a **Twilio**-integrated appointment scheduling workflow, a **Mapbox**-integrated route optimization flow, an invoice reporting dashboard using **Recharts**, and a math-heavy trucking tariff assessment workflow

### Fullstack Software Engineer @ Athelas                **Aug 2021 - Oct 2022**
*Fullstack engineer leading cross-functional engineering efforts across Enterprise, Growth, and CareML teams as the company transitioned to offering enterprise-level products.*
- Redesigned package shipping automation flow using **Python** and **Flask**, increasing shipping throughput by ~1000%
- Designed & built out Athelas Enterprise API for first Enterprise-level deal in **Python/Flask** (https://athelas.readme.io/docs)
- Bespoke **Typescript & Vue** health data visualization suite project focused on meeting customer needs through rapid iteration. (**Vue** and **Typescript** frontend**, Flask, Python, SQLalchemy** and **PostgreSQL** backend)

### Software Engineer Intern @ Athelas                **Summer 2021**
*Backend & firmware engineering intern, learning the role of a software engineer at a high-growth startup.*
- Designed & implemented asynchronous, cadenced batch shipping of RPM related products for 25,000+ patients using **Python, Flask and Celery** deployed on **GCP** alongside exhaustive logging & error monitoring
- Worked directly with multiple vendors in China to negotiate specifications for, then architect & implement backend and database changes using **Python, Flask** and **PostgreSQL** to support new Athelas RPM hardware

### Software Engineer Intern @ HP Enterprise                **Summer 2019 & Summer 2020**
*Software engineering intern on various projects for QAOps, System Test & PerfOps teams.*
- Won **HPE Best in Class Scholarship** & **1st Prize** at **HPE Intern Project Fair**
- Created tooling to manage orchestrated **Docker** containers that would run different test suites on HPE Storage arrays
- **~115% more efficient** in using system resources for testing than existing VM-based test workflows

## Projects

### Golang-FUSE Distributed Filesystem                **Nov 2021**
- Log-structured distributed filesystem written in **Golang** at the user level, thanks to **Bazil FUSE**
- Uses **Merkle Trees** to efficiently determine inconsistencies between nodes, leverages **gRPC & Google Protobufs** to serialize and communicate this metadata
- Implements **Rabin-Karp Fingerprinting** for content-defined chunk boundaries as in *A Low-bandwidth Network File System* (Muthitacharoen et. al)

### CMSC389E: Digital Logic Design through Minecraft                **Jan 2020 - Dec 2021**
- Head lecturer for a **digital logic design & theory university course** at the University of Maryland, College Park
- Guided students as they built a 2-bit computer in the hit sandbox game '*Minecraft*' complete with ALU, ROM, and RAM Designed and built an online textbook to demonstrate concepts through online demos (https://www.cs.umd.edu/class/fall2021/cmsc389E/)
- Executive Director of STICS (https://stics.umd.edu/), enabling university students to design and teach courses at UMD

*references available upon request*