Ashwin Bhat

305-878-1762 • ashwin@shwin.tech • shwin.tech • github.com/The-Shwin • linkedin.com/in/shwin

EXPERIENCE

Amazon Project Kuiper　　　　　　　　　　　　　　　　　　　　　　　　*March 2024 – Present*
Software Engineer　　　　　　　　　　　　　　　　　　　　　　　　　　　*Redmond, WA*
Python, TypeScript, AWS, SQL

- Pioneered monitoring and remediation services for the entire ground systems fleet of Kuiper's low earth orbit satellite internet constellation including failure detection during contacts, general site availability, automatic ticketing and monitoring, and visualization of contact metrics.
- Championed high standards of service-level agreements and designed self-detection of operational issues in the monitoring system leading to no operational issues during first production launch.
- Led the development of stress tests and validated scaling/operational readiness targeting a 99.99% uptime and performance rate for future general availability.
- Provided ground system support during Kuiper's first production launch to determine antenna stability.
- Enabled non-technical users to access programmatically analyzed ground contact and site availability data by developing an end to end data solution with an ETL flow for querying and visualizing telemetry.
- Designed orchestration service for fine calibration of antenna control units across many sites and antennas via backend simulations.

Twitch Interactive (Amazon)　　　　　　　　　　　　　　　　　　　　　*June 2022 – March 2024*
Software Engineer　　　　　　　　　　　　　　　　　　　　　　　　　　　*San Francisco, CA*
Golang, TypeScript, React, AWS, Redis, RPC, GraphQL

- Built promotions for the Ads Incentive Program at Twitch, increasing Ad adoption by creators by 2x.
- Full-stack contributions to various ad running growth/supply products leading to a 28.57% YoY increase in ad densities.
- Modernized Twitch's Creator Rewards System including performance upgrades, code rewrite, and migration of 500 million calls/day service with zero downtime and 50% cost reduction.
- Improved the team's observability tooling, leading to a reduction in systematic errors in reporting metrics and a 65% decrease in false alarms while empowering 99.99% service availability.
- Led the measurement and experimentation designs for the Ad Insights product.

Medly Pharmacy　　　　　　　　　　　　　　　　　　　　　　　　　　　*October 2020 – June 2022*
Software Engineer　　　　　　　　　　　　　　　　　　　　　　　　　　　*New York, NY*
TypeScript, React/Redux, Node, AWS, Postgres, GraphQL

- Led full-stack planning and development of B2C products for patient experience and internal web apps for full prescription lifecycle at growing pharmacy chain.
- Implemented event-based architecture for processing incoming prescriptions and routing them to be serviced via internal tooling or direct to customer text messages leading to 5x throughput.

Galen Robotics　　　　　　　　　　　　　　　　　　　　　　　　　　　　*May 2018 – May 2021*
Software/Electrical Engineer　　　　　　　　　　　　　　　　　　　　　*Baltimore, MD*
C++, Matlab, Electronics, PCB Design

- Developed motion trajectory constraints, sensor-based error checks, and logging features for a surgical robot.
- Formulated requirements and designed, built, and tested the electrical workings of two prototypes of the surgical robot which later received FDA approval with De Novo classification.
- Supervised team of electrical engineering interns. Mentored interns through iterative design and review process.
- Tuned 5-DOF robot for smooth motor control.

SKILLS

Languages: Python, TypeScript, Go, C++, C, MATLAB, SQL, Java, JavaScript
Libraries: GraphQL, Redis, OpenCV, scikit-learn, PyTorch, NumPy, React, Skyfield, ROS, Gazebo, JAX, CVXPY
Tools: AWS (ElastiCache, SNS, DDB, ECS, CloudFormation, CloudWatch, Lambda), Git, Linux, Postgres, Grafana
Other: Research, Leadership, Mentoring, System Design, Founding Engineer

EDUCATION

Johns Hopkins University　　　　　　　　　　　　　　　　　　　　　　　*May 2018*
B.S. in Computer Engineering　　　　　　　　　　　　　　　　　　　　　*Baltimore, MD*

Minors: Robotics, Applied Math & Statistics, Computer Science

RESEARCH & PROJECTS

JHU Autonomous Systems Controls & Optimization Lab　　　　　　　*Undergraduate Research Assistant*

- Researched and programmed motion-based teleoperation for drone-mounted robotic arm (Razer Hydra, C++, ROS).

Electronic Tracking for Earth Movers　　　　　　　　　　　　　　　　*Johns Hopkins University*

- Created proof-of-concept tracking program with Bluetooth hardware to show relative position of a construction worker.

Florida International University REU (NSF/DoD)　　　　　　　　　　*Undergraduate Research Assistant*

- Applied statistical ML techniques for augmented terrain-based navigation by robots (Developed in Python and MATLAB).