

Ashwin Bhat

ENGINEER

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Experience

Twitch Interactive (Amazon)

San Francisco, CA

SOFTWARE ENGINEER II

June 2022 - present

- Full-stack development on various operational and business-related microservices for scheduling, running, and checking settings for ads on the ads creator experience team (Typescript, Go, AWS infrastructure).
- Led the migration, upgrades, and code refactoring of service with 500 million calls per day to new infrastructure resulting in zero downtime and cut costs in half (Go, AWS services, Redis, RPC, GraphQL).
- Championed observability improvements in team's services via methodology/tooling and identified weak points in alarm coverage that led to 65% reduction in false alarms and helped identify systematic errors in reporting metrics.
- Led the engineering design for a measurement and experimentation plan on a new ad running insights feature.
- Contributed to the backend design and full-stack development of Ads Incentive Program which steadily increased ad running density among streamers by 28% YoY. Added frontend features and improvements for visibility of team's features on the Twitch website and drive increased ad supply.
- Worked on-call rotations that required coverage of 11 backend microservices and monitoring frontend availability.

Medly Pharmacy

New York, NY

SOFTWARE ENGINEER II

Oct. 2020 - June 2022

- Led full-stack design and development B2C products and internal web apps for collecting patient information and scheduling prescription delivery (Typescript, React/Redux, Node, AWS, Postgres, GraphQL).
- Continually added features and made bug fixes to internal web app, leading expansion of pharmacy software from two pharmacies to over 20 locations as the business grew.
- Implemented event-based architecture for processing incoming prescriptions and routing them to be serviced via internal tooling or direct to customer text messages.

Galen Robotics

Baltimore, MD

ELECTRICAL/SOFTWARE ENGINEER - (LEAD ELECTRICAL ENGINEER JUN. 2019-SEP. 2020)

May 2018 - May 2021

- Programmed motion trajectory constraints, sensor-based error checks, and logging features for a surgical robot (C++).
- Designed, built, and tested printed circuit boards and RFID antennas in electrical subsystems. Developed requirements and designed the electrical workings of two versions of the surgical robot.
- Supervised team of electrical engineering interns. Mentored interns through iterative design and review process.
- Implemented PID tuning for smooth motor control of the robot's 5 degrees of freedom.

Skills

Languages Python, Typescript, Go, C++, C, Matlab, SQL, Java, Javascript

Software Libraries GraphQL, Redis, OpenCV, scikit-learn, PyTorch, numpy, React, Robot Operating System (ROS), Gazebo

Software Tools/Misc. AWS: Elasticache, SNS, S3, DDB, ECS, EC2, CFN, CloudWatch, Lambda, KMS, SQS; Git, Linux, Postgres

Electrical Skills PCB Design, Circuit Analysis, FPGAs, Soldering, Oscilloscopes, Function Generator, Multimeter

Other Skills Research, Working as a founding engineer, Leadership, Mentoring

Education

Johns Hopkins University

Baltimore, MD

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

May 2018

- IEEE (Vice President of Student Chapter), Robotics Club, Association for Computing Machinery
- Minors in Robotics, Applied Math and Statistics, and Computer Science

Research/Projects

Johns Hopkins University: Laboratory for Computational Sensing and Robotics

Baltimore, MD

UNDERGRADUATE RESEARCH ASSISTANT

Sept. 2016 - May 2018

- Researched and implemented motion-based teleoperation for a robotic arm attached to a drone for application in aerial object manipulation using the Razer Hydra game controller, C++, and ROS.

Electronic Tracking for Earth Movers

Baltimore, MD

ADVANCED ECE TEAM PROJECT COURSE

Jan. 2018 - May 2018

- Implemented Kalman filter based noise reduction of Bluetooth sensors to reduce error in predicting location of Bluetooth beacon that would be placed on construction worker around the earth mover.
- Created a proof-of-concept tracking program in MATLAB to show estimated position of worker and used weighted readings to reduce hysteresis.

Florida International University: School of Computing and Information Sciences

Miami, FL

UNDERGRADUATE RESEARCH ASSISTANT, NSF/DoD FUNDED REU

May 2017 - Aug. 2017

- Applied advanced statistical techniques to improve hyper parameter selection in augmented terrain-based navigation by robots (Developed in Python and MATLAB).
- Used selection and weighting techniques to develop an algorithm for reducing autocorrelation to create combined parameter data maps for underwater localization. This algorithm achieved greater accuracy for localization.