Malay Agarwal
Arlington, VA │ TS/SCI with Polygraph

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Software engineer finding enjoyment with full stack, embedded programming, and creating tools that matter.

Work Experience

Senior Software Engineer │ *Booz Allen Hamilton* │ May 2024 – Present
Software Engineer │ June 2023 – May 2024
- Led technical architecture and development of greenfield Air Force modeling & simulation platform from concept to first customer deployment, building a no-code environment that reduced mission planning time from weeks to hours.
- Spearheaded technical architecture decisions that accelerated development velocity, including implementing strict linting and type safety, establishing microservice patterns, and creating shared infrastructure-as-code templates.
- Built trusted relationships with stakeholders through clear technical communications, leading to successful capability demonstrations and program milestone approvals.

Army Cyber Officer │ *91st Cyber Brigade* │ May 2023 – Present
- Led technical planning and mission preparation for a 20-person cyber team, developing repeatable processes that increased readiness before mission mobilization.
- Managed cross-functional team through complex technical training events, coordinating between intelligence, cyber, and operations personnel.
- Assisted with Battalion-level operations and training, presenting regularly to higher leadership in the S3 shop.

Research Intern │ *NASA* │ July 2022 – August 2022
- Collaborated on a pivotal project involving UAV operations in the Aleutian Islands, providing critical support to NOAA for marine life monitoring through aerial imaging and scanning.
- Developed system to monitor historic ship data in area of operations and signify trends to aid UAS/UAV missions.
- Addressed and resolved icing challenges during flight, demonstrating problem-solving acumen and technical expertise in adverse conditions.

Additional Projects

Algorithmic Trading Systems │ March 2020 – August 2022
- Live traded autonomously on stock and crypto markets using Python, Go, and Docker handling over 1000 transactions daily.
- Optimized buy/sell signals based on mathematical indicators and strategies
- Efficiently processed large data and backtested for accurate results
- Maintained secure and clean code practices for collaboration

Smart Foam Roller │ September 2018 – June 2019
- Implemented microcontroller with variety of sensors and electrical engineering concepts
- Effectively collected and communicated marketing data
- Pitched to investors leading to funding to build prototypes

Education

Penn State University │ July 2019 – May 2023
B.S. in Computer Science and commissioned as a 2LT in the Army

Skills
Programming Languages
Python, Go, C, TypeScript, JavaScript, React, SQL, Rust

Tools
Docker, Git, Linux, Digital Ocean

Interests
Powerlifting, running, skiing, video games, vim enthusiast

Current Learning
Learning how to use Rust as a systems programming language by creating containers and a shell from scratch