

Hasan Shameer Muhammed

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EDUCATION

Drexel University, College of Engineering | GPA: 3.64

B.S. in Computer Engineering & Electrical Engineering, Minor in Mathematics

Honors: AJ Drexel Scholarship, M. Rosenberg Scholarship, Dean's List – 9 terms

Philadelphia, PA

Sep 2020 – Jun 2025

PROFESSIONAL EXPERIENCE

Bristol Myers Squibb

Software Engineer

May 2025 – Present

Lawrenceville, NJ

- Architected an event-driven AWS pipeline automating Benchling plate registration, cutting hands-on time from 2–3 hrs to zero
- Scaled registration to 1,600+ entities/plate past Lambda's 15-min limit via resumable Step Functions; zero defects at launch
- Built MCP servers for a Claude Agent SDK multi-agent system running lab workflows from one prompt, saving 40 hrs/week
- Cracked a production outage halting biologics ID assignment in 2 hrs, tracing it across 3 AWS accounts to an SNS 256 KB limit
- Rebuilt a Node.js/Next.js lab tool into a modular architecture, adding 5 antibody modalities and cutting setup from 5 to 2–3 hrs
- Drove a legacy LIMS sunset: migrated 2,333 QA certificates with zero failures and retired its AWS stack across 3 environments

Cloud Engineer Intern

Oct 2024 – Mar 2025

- Developed a Python/Lambda relicensing workflow, cutting manual license tracking 50% and reallocating \$299/seat annually
- Delivered a QuickSight dashboard portal on Node.js, S3 and CloudFormation, reducing time-to-insight 40% for stakeholders

Resolution Life US

Machine Learning Engineer Intern

Mar 2023 – Sep 2023

West Chester, PA

- Automated financial administration and policy rectification tasks in Python, saving 10+ hours weekly
- Deployed real-time Data Lake validation, cutting data errors 40% and reducing manual effort

The Penn Mutual Life Insurance Company

Software Developer Intern

Mar 2022 – Sep 2022

Horsham, PA

- Engineered a Python predictive analytics tool for insurance forms, the ML baseline that cut underwriting errors 45%
- Automated CI/CD deployments with Docker & Jenkins; implemented SQLite3, achieving a 70% runtime reduction

PROJECTS & LEADERSHIP

hasanshameer.com | 3D Football Game Portfolio

Oct 2026

- Developed a portfolio played as a 3D football game, where visitors shoot at 4 goals to unlock 13 animated project replays
- Optimized a React Three Fiber + Rapier scene to hold 60 fps via adaptive resolution and shadows, backed by Vercel + Redis

Learn AI | Senior Design Project

Sep 2023 – Jun 2024

- Engineered a LangChain/GPT feedback API using BERT embeddings and cosine similarity to guide students toward answers
- Built instructor and student portals on React/MUI and Express/MongoDB with JWT auth, verified by 59 Jest and Cypress tests

Undergraduate Student Government Association | Senator

Nov 2022 – Jun 2024

- Co-established a tax-filing resource section in the Drexel Student Guide for 3,500+ international students
- Introduced a temperature-preference option in Student Housing applications to improve roommate compatibility

Hummingbird | Best Personal Safety Project at Dragon Hacks

Apr 2024

- Created an autonomous safety drone to enhance urban safety by escorting individuals during late-night travel
- Implemented tracking with GPU-accelerated YOLOv5, ByteTrack and a PID controller so the drone follows at a safe distance

Theia | Best Health Hack at Dragon Hacks

Apr 2023

- Designed a computer vision system with Raspberry Pi enabling the visually impaired to navigate the environment
- Architected a REST API and ML pipelines for depth estimation and object detection, raising accuracy 40%

Hygia | Best Student Project at Philly Codefest

Apr 2022

- Prototyped an app helping people in opioid recovery avoid relapse, with a user-centric interface
- Mapped nearby NARCAN centers from public health data and curated uplifting content via sentiment analysis of 15K+ articles

SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Java, C/C++, Bash, MATLAB

AI & Agents: Claude Agent SDK, MCP servers, multi-agent orchestration, AWS Bedrock, LangChain, Playwright, PyTorch, scikit-learn

Cloud & DevOps: AWS (Step Functions, Lambda, EventBridge, DynamoDB, S3, CloudFormation), Vercel, Docker, GitHub Actions

Frameworks & Data: FastAPI, Node.js, Next.js, React, Three.js (R3F), NATS, PostgreSQL, Redis, Oracle, pytest, Benchling API