Kushal Gadamsetty

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Education

Barrett The Honors College at Arizona State University Tempe, AZ
Bachelor of Science in Computer Science and Mathematics (Statistics); GPA: 4.0/4.0 *May 2027*

Relevant Coursework; Data Structures and Algorithms, Applied Linear Algebra, Computer Vision, Multivariable Calculus, Discrete Mathematical Structures,

Work Experience

AI and Deep Learning for Imaging and Medicine Lab April 2025 – Present
Research Assistant *Tempe, AZ*

- Engineered automated ML training pipeline processing **300GB+ X-ray datasets** on ASU GPU infrastructure, developing **Python scripts** and **SLURM scheduling** reducing training setup time by **40%+**
- Built **ResNet-50** classification and segmentation models achieving **95%+** accuracy across **18** organ-specific classifications, collaborating with **10+** researchers on comparative analysis and cancer detection

Tamid Group November 2024 – Present
Frontend Web Developer *Tempe, AZ*

- Developed **full-stack applications** serving **1000+** users using **React** and **Node**, building reusable components and **SQL database** integrations for improved user experience
- Architected **cloud infrastructure** for Israeli startup Tut-a-Tet on **AWS EC2**, establishing scalable deployment and monitoring systems supporting **500+** concurrent tutoring sessions

Biodesign Institute - Biocomputing Scholar September 2024 – May 2025
Undergraduate Researcher *Tempe, AZ*

- Built data processing pipeline transforming **100GB+** network topology data from **CSV to JSON**, implementing **Python ETL** workflows to analyze **10+** Russian ISP systems and predict node censorship probability using **bayesian inference**
- Developed network visualizations using **Python libraries** and **PyStan** for statistical analysis, creating interactive dashboards of connected network nodes and collaborating with **4+** PHD researchers

Projects

BadgeSheet (Hackathon runner up) | *React, Supabase, Stripe, Git, Typescript, Javascript* **Site**

- Built a **full-stack SaaS platform** processing **10,000+** name badge generations for event organizers
- Architected a scalable **PostgreSQL** database and created a **Stripe payment API** supporting **500+** concurrent users
- Implemented **serverless edge functions** to reduce API response latency by **40%** and minimize hosting costs through optimized compute allocation

Phoenix Air Quality Dashboard (Hackathon Winner) | *React, Node.js, Python, Tableau, JavaScript* **Site**

- Built a **full-stack web application** serving **1,000+** users across Phoenix metropolitan area with real-time air quality data visualization
- Created and integrated **custom API** to access Phoenix air quality sensors citywide, implementing automated **CI/CD pipelines** with Vercel deployment
- Led cross-functional team of **5 developers** to secure **first place** and **$2,875 prize** through agile development methodologies
- Collaborated with **City of Phoenix** to strategically place air quality sensors at **school district pilot locations** for enhanced community health monitoring

Autonomous Maze Navigation Robot | *MATLAB, Control Systems, Lego EV3* **Site**

- Built **embedded control system** processing **3+ sensor inputs** at **10Hz** to achieve **95%+** maze completion rate with sub-second obstacle response times
- Developed **modular MATLAB codebase** with **200+ lines** of optimized control algorithms, implementing PID-based motor calibration for precise navigation
- Developed **real-time state machine** with **5 distinct operational modes** and created keyboard-driven manual override system supporting **8+ control commands**

Secure DNS and VPN Infrastructure | *AWS EC2, Oracle Cloud, WireGuard, Unix, Docker*

- Built **distributed network infrastructure** processing **20,000+ DNS queries daily** and **300GB+ monthly traffic** to secure internet connectivity against public network vulnerabilities
- Architected **dual-cloud infrastructure** with **AWS EC2** DNS server and **Oracle Cloud** VPN tunnel, implementing **containerized deployment system** achieving **99%+ uptime** across **12+ concurrent users**

Technical Skills

Languages: C/C++, Python, JavaScript, Java, HTML/CSS, Matlab, Typescript, Rust, Scheme, Assembly
Libraries/Tools: Docker, React, Oracle Cloud, Git, AWS Cloud, Unix/Linux, Stan, NumPy, Pandas, Slurm, PyTorch
Interests: Rubik's cubes, Raspberry Pi Hobbyist, Anime, Soccer, iPod Classic Enthusiast, 2024 NASA Space Camp Graduate