Siddhant Shah

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EDUCATION

Arizona State University **Expected May 2026**
Master's of Science in Computer Software Engineering (Cybersecurity) *GPA: 3.70 / 4.0*

Courses: Software Security, Applied Cryptography, Information Security, Advanced Data Structures & Algorithms, Cloud Computing, Emerging Languages & Programming Paradigms, Foundations of Software Engineering, Software Agility, Web-based Applications

University of Mumbai **December 2020 - May 2024**
Bachelor's of Technology in Computer Engineering (Honors in Intelligent Computing) *GPA: 8.66 / 10*

Courses: Data Structures and Algorithms, Operating Systems, Computer Networks, Database Management, Software Engineering, Distributed Computing, Information and Network Security, Intelligent Security Systems, Artificial Intelligence, Machine Learning

SKILLS

Programming Languages: C, C++, Go, Python, Java, HTML, CSS, JavaScript, SQL (PostgreSQL), Bash
Cloud and DevOps: AWS, Docker, Kubernetes, CI/CD Pipelines, Git, GitHub, Linux
Web Development Frameworks: React, Spring Boot, Django, Flask, REST APIs
Security Tools: Wireshark, Ghidra, OWASP ZAP, Scapy
Certifications: Cybersecurity Professional Certificate (Google), Tensorflow for AI, ML, and DL (DeepLearning.AI), IT Support Professional Certificate (Google)

EXPERIENCE

Arizona State University - ASU Career Services Tempe, AZ
Management Intern - International Student Career Support June 2025 - Present
- Engineered a centralized resource hub using HTML, CSS, and JS, reducing search time by 40% and serving 2000+ active users.
- Created a data analytics pipeline to capture feedback, driving a 15% increase in engagement through data-driven feature updates.
- Advised 100 students through career appointments, enhancing interview preparedness and strengthening communication.

Proxmed Pty Ltd Mumbai, India
Machine Learning Engineer Intern October 2023 - May 2024
- Developed and trained deep learning models using CNN and MONAI for a critical stroke detection system, achieving 99.4% accuracy.
- Enhanced model performance with multi-modal image registration, to improve spatial coherence in a training dataset.
- Innovated a data preprocessing pipeline using 3DSlicer and ITK-SNAP for a training dataset of 150 medical images.
- Mentored 3 interns in weekly sessions, accelerating project progress by 30% and improving cross-functional development.

PROJECTS

Scalable Image Processing Microservice | *Full Stack, DevOps, Network Security* August 2025 - December 2025
- Designed a containerized image processing microservice with FastAPI and OpenCV to handle real-time editing.
- Established a CI/CD pipeline for automated testing and deployment, ensuring high availability and system reliability.
- Performed input sanitization and payload validation to prevent malicious file uploads, securing the processing pipeline.

Software Quality Metrics Tool | *Docker, Kubernetes, React, Flask, MongoDB* January 2025 - May 2025
- Architected a distributed, multi-tiered system using microservices and containerization for software quality analysis.
- Implemented distributed caching and CI/CD pipelines, optimizing data processing throughput by 70%.
- Utilized MongoDB as a scalable storage solution to handle and report on historical software metric data.

Encryption Service Automation | *Cryptography, Algorithm Design* January 2025 - May 2025
- Designed a cryptographic module using AES data encryption and RSA key exchange, ensuring secure data transmission.
- Implemented an object-oriented design for a modular, reusable cryptographic module, ensuring scalable and maintainable service.
- Conducted encryption validation using OpenSSL and penetration tests, achieving a 30% improvement in system resilience.

Vulnerability Detection and Correction Tool | *Cybersecurity, Machine Learning* January 2024 - May 2024
- Achieved 93% accuracy in vulnerability detection by building a custom LSTM model with Tensorflow.
- Leveraged NLP by fine-tuning a GPT-2 model on CVEFixes dataset to automate generation of security patches.
- Engineered a data pipeline to preprocess and categorize a bug dataset, establishing a robust foundation for model training.