Shreyas Pradeepkumar Khandale

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science
Master of Science in Computer Science | **Cumulative GPA**: 3.7/4.0 *Expected May 2026*

AISSMS College Of Engineering Pune, India *June 2024*
Bachelor of Engineering in Computer Engineering | **Cumulative GPA**: 3.5/4.0

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, HTML, CSS, PHP, SQL, CUDA, Bash / Shell Scripting, Git

Software and Tools: PyCharm, VS Code, Jupyter Notebook, GitHub, Tensoreras, Scikit-Learn, PyTorch, MySQL/PostgreSQL, FastAPI & Flask, AWS, Google Cloud, SQL Server & phpMyAdmin, NetBeans, Apache Ant, Wireshark

PROFESSIONAL EXPERIENCE

Digital Twin Technology & Quantum Integration Research Assistant | New York, United States *Jan 2025 – Present*
- Conducting research under Prof. Yemeng Zing on integrating Quantum Networking, Quantum Computing, and Edge computing with Digital Twin technology to enhance real-time simulations, predictive analytics
- Developing quantum-enhanced AI models, edge computing frameworks, and secure data exchange protocols to improve the scalability, efficiency, and intelligence of next-generation Digital Twin architectures

Binghamton University Information Technology Services | New York, United States *Jan 2025 – Present*
- As a **Computer Services Administrator**, I maintain a configuration-management database of 2500 + endpoints and 150 virtual/physical servers; Python + SQL scripts now auto-dedupe records and flag license gaps
- Oversee and maintain 10,000+ student records focusing on data accuracy, privacy, accessibility and security

AISSMS College Of Engineering Pune | Pune, India *June 2022 – May 2024*
- Served as a **Teaching Assistant for Data Structures & Algorithms**, supervising 250+ students across 4 semesters through lab sessions, project mentoring, and curriculum development focused on algorithm implementation, memory management, and data structure operations
- Functioned as a **teaching assistant for cloud computing** for over four semesters, working in cloud security, virtualization, and distributed storage systems. Led interactive lab sessions and technical workshops on AWS, Microsoft Azure, Docker, Kubernetes, and IoT-cloud integration, equipping students with hands-on experience in cloud deployment
- Worked as a **Teaching Assistant for Artificial Intelligence** in intelligent agents, search algorithms, game theory, and knowledge-based systems. Led lab sessions and hands-on workshops, guiding students through heuristic search techniques, adversarial search, and logical inference model, real-world AI challenges

Acmegrade | Pune, India *Dec 2022 – Jan 2023*
- As a **Full-Stack Developer Intern**, I contributed to developing the Equinox Book Store, a web-based platform that streamlined book purchasing for 500+ users, including vendors and customers
- Enabled users to browse 1,000+ book purchases, and track orders, while allowing administrators to manage inventory and transactions with 99% accuracy
- By integrating an automated order processing module with real-time stock updates and filtered browsing, I improved inventory accuracy by 90%, enhanced customer engagement by 95%

PROJECT EXPERIENCE

IoT Based Network Attached Storage | Personal Research Project *Jan 2024 – Nov 2024*
Technologies: Raspberry Pi 4, OpenMediaVault, Linux, Raspberry Pi OS, SSH, Bash, iOS, Android, File Management System
- Developed a private cloud storage solution using Raspberry Pi 4 and repurposed storage devices, optimizing cost and efficiency and building a **Cross-platform NAS system**, ensuring seamless accessibility across Windows, iOS, and Android.
- Published a research paper on *Ijraset*, ISSN: 2321-9653 https://doi.org/10.22214/ijraset.2024.65616
- Results: Achieved up to 400MBps SSD read/write speeds, enhanced system reliability, and delivered a secure, scalable, and cost-effective IoT storage solution

Advanced Mobile Price Detection & Analysis System, Project Lead | Group Project *Nov 2024 – Feb 2025*
Technologies: Python, PyTorch, TabNet, XGBoost, LightGBM, CatBoost, Matplotlib, Seaborn, Plotly, Grid Search
- Built a **machine learning model** using Random Forest, XGBoost, and SVM, achieving 92% accuracy, and improving baseline performance by 18% in predicting mobile price categories
- Processed and analyzed 5,000+ mobile device records by handling missing data, normalizing features, applying feature selection, improving model efficiency
- Implemented 5-fold cross-validation, improvisation and reducing overfitting, with evaluation metrics including precision (90%), recall (88%), and F1-score (89%)
- Results: Extracted key insights from feature importance analysis, identifying RAM, battery power, and processor speed as the top 3 factors influencing mobile pricing, enabling data-driven decision-making for manufacturers and retailers