Ajita Bhardwaj

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EDUCATION

Master of Science, Computer Science **Aug 2024 – May 2026**
Arizona State University *Tempe, Arizona*

Bachelor of Technology, Computer and Communication Engineering **Jul 2018 – Jul 2022**
Manipal Institute of Technology *Manipal, India*

SKILLS

Programming Languages: Python, Java, JavaScript, C++, SQL, MySQL, Terraform, Bash, GO, YAML, HTML, CSS
Software Engineering & Frameworks: REST APIs, CI/CD, Fast API, Flask, React, Agile/Scrum, Git/Bitbucket, Jira, Confluence
Systems & Platforms: Linux, Docker, Kubernetes, Jenkins, Ansible, Cloud platforms, Azure, AWS, Puppet, VM Ware, Rundeck
Database & ML tools: SQL, MySQL, RDSMS, PostgreSQL, Hadoop, NumPy, Pandas, Scikit-learn, TensorFlow, LLMs

PROFESSIONAL EXPERIENCE

NLP Intern **Oct 2025 – Present**
IDX Exchange *Remote, USA*
- Implement Python text-to-SQL pipeline converting natural-language queries to SQL with rule-based and LLM-based parsing
- Build backend systems with Fast API and MySQL, adding schema detection and caching for secure, sub-second queries
- Design a full-stack web app with React UI and REST APIs, supporting real-time property search with high accuracy, reliability

Developer **Jul 2022 – Jul 2024**
Fastenal India *Bangalore, India*
- Led the design and development of scalable automation pipelines in Python, Bash, Ansible to replace manual workflows across production, testing, and development environments, cutting deployment effort by 60% and enhancing security compliance
- Built scalable API-driven automation to execute end-to-end monthly patching across 1,500 Linux servers, including pre-checks and post-patching infrastructure validation, achieving zero manual effort, 70% lower downtime and enhanced system stability
- Built reusable Terraform modules and IaC workflows for AWS/Azure, achieving 50% faster provisioning, standardised builds
- Created modular automation workflows in Rundeck, improving cross-team productivity by 40% and standardizing executions
- Built fully automated RPM lifecycle system- publish, promote, rollback, across all servers, increasing release cycles by 70%
- Developed Bash/Python scripts for log analysis and anomaly detection, reducing incidents by 25% through early detection
- Built and containerized microservices using Docker, improving environment consistency and deployment reliability by 30%
- Collaborated with cross-functional teams to integrate workflows in Rundeck, Jenkins, and Bitbucket, automating deployments
- Mentored and supported interns throughout ongoing projects, fostering collaboration and ownership within the team

IT Intern **Jan 2022 – Jul 2022**
Fastenal India *Bangalore, India*
- Developed Python scripts to automate disk monitoring and file-system validation, cutting storage failure incidents by 20%
- Led routine patch management, OS package updates, and system hardening efforts to enforce internal security standards, proactively reduce system vulnerabilities, and sustain compliance across mission-critical Linux infrastructure

IT Summer Intern **May 2021 – Jun 2021**
Comviva *Gurugram, India*
- Contributed to the integration of SSO with DAF project by designing and developing APIs in Python to seamlessly integrate Single Sign-On functionality with the DAF deployment automation platform, ensuring secure and unified user access

OTHER EXPERIENCE

Program Coordinator **Sep 2024 – Present**
Arizona State University, PFF Scholarship *Tempe, Arizona*
- Extract and analyse scholarship data from PeopleSoft with Python, generating reports for leadership teams to drive decisions
- Maintain records and create visualization dashboards with MS Excel, Google Sheets enhancing data reliability and efficiency

PROJECTS

Graph-based Data Processing and Scalable Data Pipeline Design **Jan 2025 – Apr 2025**
- Implemented graph-based routing algorithms like PageRank and BFS on NYC Taxi trip graphs to compute optimal paths, routing optimization and ETA prediction for urban mobility systems.
- Developed a scalable and distributed data pipeline leveraging Kubernetes, Kafka, and Neo4j for data analytics and processing
- Created deployment configurations, YAML files, scripts to integrate Kafka, Zookeeper, and Neo4j in Kubernetes environment

Elastic Face Recognition System on AWS **Jan 2025 – Mar 2025**
- Designed a multi-tier elastic face recognition application on AWS Cloud Platform with a PyTorch-based inference backend and custom autoscaling controller, achieving <2s response time for 100+ concurrent customer-facing API requests
- Deployed a serverless pipeline using AWS Lambda, Docker on ECR, integrating functions via SQS
- Extended inference to the edge using AWS Greengrass, deploying MTCNN-based face detection on an IoT Core device with MQTT communication, enabling near-real-time edge-cloud processing for video analytics