

Aditi Girish Thakre

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EDUCATION

Master of Science in Data science, Arizona State University (GPA: 3.61/4) Aug 2024 - May 2026

Courses: Statistical Machine Learning, Statistics for Data Analysts, Data Mining, Database Management Systems

Bachelor of Engineering in Computer Engineering, Pune University (GPA: 3.65/4) Aug 2018 - Jun 2022

Courses: Object Oriented Programming, Data Structures and Algorithms, Cloud Computing, Computer Networks

TECHNICAL SKILLS

Languages/Technologies: Python, C, C++, JavaScript, Java, SQL, HTML, CSS, AWS, Git, Tableau, Tomcat, PowerBI

Machine Learning: OpenCV, NLP, PyTorch, TensorFlow, Pandas, Numpy, Scikit-Learn, Keras, Matplotlib, LLMs, VLMs

Frameworks/Databases: MySQL, MongoDB, Jenkins, Checkmarx, Black Duck, Fisheye, React JS, Node.js, Docker

PROFESSIONAL EXPERIENCE

Fidelity Information Services – FIS, India: Software Engineer Jun 2022 - Aug 2024

- Resolved 1500 high-priority vulnerabilities in the **Checkmarx**, including **SQL injection**, **cross site scripting**, and authentication flaws across files using **Java**, **JavaScript**, and **SQL** reducing vulnerabilities by **95%** in the product.
- Eliminated **90%** of vulnerabilities and versioning risks in open-source libraries, achieving a clean **Black Duck** scan.
- Implemented UI fixes on 50 product pages using **CSS**, **HTML**, and **JavaScript** enhancing user experience by **80%**.
- Constructed **SQL stored procedures** based on business requirements, enhancing data quality by **15%**.
- Enhanced development workflow by implementing **CI/CD pipelines** using **Jenkins**, leading to a **40%** reduction in deployment time and upgraded **Tomcat server** for product, resulting in a **25%** enhancement in server efficiency.

Cognizant, India: Data Analyst Intern Mar 2022 - Jun 2022

- Initiated a project that improved efficiency by **40%**, utilizing **Node.js** and **Express.js** for backend development.
- Created interactive **Tableau dashboards** to track rental trends, increasing customer engagement by **12%**.
- Automated **SQL queries** and executed advanced Excel macros, enhancing data processing efficiency by **30%**.
- Cleaned and managed data using **Pandas**, **NumPy**, and **Scikit-learn** resulting in a **30%** improvement in accuracy.

National Institute of Electronics & Information Technology, India: Data Analyst Intern May 2021 - Jul 2021

- Developed a CNN model using **TensorFlow/Keras** on the **CIFAR-10** dataset, with **87%** validation accuracy.
- Stacked **Conv2D**, **MaxPooling2D**, and **Dense** layers for automated feature extraction and classification in the model.
- Optimized using **Adam optimizer** and **SparseCategoricalCrossentropy** loss, improved model performance by **25%**.
- Evaluated model performance using **precision**, **recall**, and **F1-score**, and visualized metrics through **Matplotlib**.

PROJECTS

Natural Language to SQL for Database Querying Jan 2025 - May 2025

- Built an **Streamlit UI** with a **FastAPI** and **Uvicorn** backend for real-time natural language to SQL conversion.
- Fine-tuned a **T5-base transformer model (220M parameters)** on the **Spider dataset (10,181 queries, 200 DBs)**.
- Engineered grammar-aware decoding and schema embeddings using **GNN** achieving **90.0%** execution accuracy.
- Implemented ambiguity detection and hierarchical context encoding using **LSTM** with **78.2%** exact match.
- Architected **SQL_Copilot** pipeline using **Scikit-learn** with vector similarity schema retrieval, **LLM-driven SQL** generation, syntax validation, iterative correction, and fallback strategies supporting **99.4%** syntactic correctness.

Automated Sanitizer Dispenser and Mask Detector Jan 2021 - May 2021

- Built a **hardware-software system** for real-time **mask detection** and **sanitizer dispensing** using **computer vision**.
- Utilized **800+ images** (50% with masks, 50% without masks) and enhanced the dataset through data augmentation.
- Used **Haar Cascade Classifier** for face detection and integrated Arduino with IR sensors for sanitizer dispensing.
- Engineered a mask detection **CNN model with Python, TensorFlow, Keras, and OpenCV** resulting in **96%** recall.
- Achieved **98%** training accuracy using dropout regularization and batch normalization minimizing overfitting.

ACHIEVEMENTS

- Led the **ACM (Association for Computing Machinery) Student Chapter** to national recognition by securing the **Student Chapter Excellence Award 2020 - 2021**.
- Awarded a **Merit-Based Scholarship** of **\$6,000** by **Arizona State University** for outstanding academic performance.