

SASHANK MACHIRAJU

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EDUCATION

Northeastern University

BOSTON, MA

Master Of Science in Information Systems

May 2025

Relevant Coursework: Data Engineering for Generative AI, Data Management and Database Design, Data Architectures for BI

BITS Pilani, Dubai Campus

DUBAI, UAE

Bachelor Of Engineering in Computer Science

Jul 2022

Relevant Coursework: Fundamentals of Data Science, Data Mining, Database Management Systems, Algorithm analysis

TECHNICAL SKILLS

Technical: Java, Python, SQL, JavaScript, HTML, CSS, Angular, ReactJS, NodeJS

Databases: MongoDB, PostgreSQL, MySQL, Microsoft SQL Server, Amazon S3

Tools: Power BI, Tableau, Alteryx, Talend Studio, Azure Data Factory, Snowflake, Apache Spark

Cloud & DevOps: Amazon Web Services (AWS EC2, RDS, Lambda, EventBridge), GitHub Actions, CI/CD, Gunicorn

Frameworks & Libraries: OpenAI SDK, CrewAI, Phidata, Pandas, SciPy, Scikit-Learn

PROFESSIONAL EXPERIENCE

AI ENGINEER CO-OP

Jan 2022 - Jul 2022

Easybee AI

- Developed advanced chat and voice agents using Python and the OpenAI SDK, improving customer interaction and response times.
- Implemented a CI/CD pipeline with GitHub Actions and deployed on AWS using gunicorn, streamlining the deployment process.
- Enhanced the precision of search results by implementing a vector database for semantic image retrieval.
- Designed a RAG pipeline architecture to efficiently manage and retrieve information from large knowledge bases.
- Configured AWS services such as EC2, RDS, Lambda, and EventBridge to ensure scalable and reliable cloud infrastructure.

WEB DEVELOPMENT INTERN

Jan 2022 - Jul 2022

Al Sagr National Insurance Company, Dubai

- Managed deployment of a web application by coordinating with a team of 4 using Agile practices, improving efficiency and satisfaction by 30%.
- Engineered reports for insurance claims, automating the generation of 100+ reports daily, reducing processing time by 25%.
- Integrated JavaScript, React, and Angular to develop a responsive user interface, improving usability and reducing redundant data on reports by 20%.

DATA ANALYST INTERN

Jun 2020 – Aug 2020

Verudix Software Solutions Pvt. Ltd.

- Spearheaded the implementation of sentiment analysis algorithms using Twitter API and Python, accurately predicting trends for the Bihar State Legislative Assembly Elections 2020.
- Utilized Python and Tableau to develop 3 interactive visualization models, enabling clients to analyze and derive insights from election sentiment data.
- Automated data analysis models using Python scripts, revealing key trends over the past 5 years and reducing manual analysis time.

ACADEMIC PROJECTS

IMDB MOVIE DATA ETL & BI REPORTING

- Implemented an end-to-end data pipeline for ETL using Talend Studio & Apache Spark. Data profiling achieved using Alteryx.
- Incorporated MySQL database and Microsoft Azure Database to stage & load the data.
- Streamlined data integrity processes and reduced data redundancy by employing SCD and handling data rejects.
- Visualized the data loaded and transformed in PowerBI and Tableau for analytics to answer essential BI questions.

HOSPITAL MANAGEMENT SYSTEM

- Collaborated with a team of 5 using Agile practices to implement and deploy a travel website, ensuring efficient task management.
- Independently employed ReactJS, Node, JS, CSS, bootstrap, and MySQL, resulting in a streamlined and efficient user interface.
- Integrated third-party APIs for real-time flight price tracking and a secure payment portal using Stripe

FACE MASK DETECTION USING KERAS, OPENCV AND TENSORFLOW

- Pre-processed and augmented a dataset of 10000+ labelled images containing faces with and without masks.
- Implemented MobileNetV2 architecture with classification accuracy of 92% for efficient feature extraction and mask detection.
- Developed and deployed a real-time face mask detection system using OpenCV, enabling seamless video stream processing for live environments.