

JOEL LOUIS MENACHERY

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SKILLS

Programming Languages: Python (Pandas, NumPy, Scikit-learn), SQL, Java, TypeScript(NextJS), JavaScript
Technology/Frameworks: Keras, TensorFlow, RESTful APIs, Flask, Django, Docker, AWS, GCP, Git, Databricks
Database and Data Management: Relational DB (Postgres, MySQL), NoSQL Databases (MongoDB)
Core Components: Data Analytics, Data Quality & Data Cleansing, ETL Pipelining, Machine Learning, Statistics, Data Visualization(Power BI, Tableau), MLOps, Data Structures and Algorithms, CI/CD, Object-Oriented Programming (OOP), Microservices, API Design and Development, Agile Methodologies

EXPERIENCE

- Adidas (Actionable Analytics Lab), Tempe, AZ: Research Assistant (Data Analyst)** May 2024 - Present
- Conducted Machine Learning and data analytics on high-volume sales data, covering over **40,000 postal codes** across the U.S., used demographic and mall traffic datasets to map and identify important zones.
 - Engineered scorecards nationwide for product segments, optimizing product placement and sales strategies across **eight distinct segments** at individual store levels identifying customer dynamics and hotspots.
 - Applied **K-means clustering** and **hierarchical clustering algorithms to develop five unique store clusters** based on **30 multi-dimensional features**, enhancing Adidas's market segmentation approach.
 - Designed interactive **Power BI dashboards** for real-time data insights, allowing cross-functional teams to strategize based on data-driven insights and facilitate scalable decision-making.
- Trustle, Vadodara, IND: Software Developer** November 2022 – July 2023
- Developed web application with **React (Next.js)** and **Django**, integrating **PostgreSQL** for storage.
 - Designed and maintained **ETL pipelines**, improving data processing efficiency by 20%, and built a **Kafka-based** data streaming pipeline for real-time admin dashboard updates rather than using change Stream (MongoDB).
 - Implemented **Nginx** for load balancing and **Sentry** for API monitoring and proactive issue resolution.
 - Ensured system reliability with **Pytest** and **Postman** for API testing, ensuring system reliability
- Legato Health Technology, Bengaluru, IND: Software Developer** July 2022 – November 2022
- Architected robust APIs with **Express.js** and **Flask Restful** frameworks, reducing manual intervention by 30%.
 - Implemented **Nodemailer** for automated email notifications, achieving a 20% increase in API response time.
 - Integrated Google's **Perspective API**, reducing moderation time by 40% and enhancing platform moderation.
 - Integrated **MongoDB change Stream** reducing the latency by 1 second and bandwidth efficiency for live updates.
- Tata Communication, Mumbai - IND: Software Developer Intern** Feb 2021 - May 2021
- Redesigned the company's website by converting **Figma** designs into an interactive **ReactJS** website.
 - Enhanced website security by changing the authentication system to **OAuth2** with **JWT** web tokens using **AuthJS**.
- Prodevans, BLR - IND: Software Developer Intern** March 2020 - June 2020
- Led a team of four developers to build an ETL tool, automating CSV data extraction and transformation. Integrated Cron for scheduled execution and enabled seamless data transfer to an S3 bucket for client access.

PROJECTS

- Urban Carbon Emissions Prediction** 2022
- Developed a PostgreSQL-Tableau system with **TabPy** and **TensorFlow** to analyze and forecast carbon emissions across **50+ cities** using **1M+** records, implementing a time series model for trend prediction. Built a CI/CD pipeline (GitHub Actions) for automated model training, evaluation, and deployment, leveraging Apache Spark.
- Illegal Transaction Detection System** 2022
- Built a **MySQL** database to process **100,000+ global transactions**, using **SQL** and **Python** to identify suspicious patterns like offshore flows, account hops, and fund sources. Automated transaction analysis with Python, integrating flagged results into a log-database with real-time insights on **Tableau**.

RESEARCH / CONFERENCE

2023 IEEE CONFERENCE ON CONTEMPORARY COMPUTING AND COMMUNICATION (InC4)

Conducted research on brain tumor detection using deep learning models, including ResNet, DenseNet, MobileNet, and VGG-16, to analyze MRI scans. Published findings in IEEE, showing the effectiveness of different neural network.

EDUCATION

- M.S, Information Technology** August 2023 - April 2025
Arizona State University, Tempe, AZ 3.6 / 4.0 GPA
- B.Tech, Computer Science and Engineering** August 2018-June 2022
Christ University, Bangalore, Karnataka, India