

Aravind Sanapala

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EDUCATION

Masters in Computer and Information Science.

January 2023 – December 2024

University of Florida

• Current CGPA: 3.36

Notable Courses :- Analysis of Algorithms, Advance Data structures and Algorithms, Programming with applied Data Science, Computer Networks, Distributed Operating Systems, Mathematics for intelligent systems.

SKILLS

Programming Languages: Python, Java, C++, C, C#, Go, Pony, JavaScript, SQL, T-SQL, U-SQL, SQLite, NoSQL

Frameworks: Bootstrap, Flask, Django, Materialize CSS, JQuery, Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, TensorFlow

Web Technologies: HTML5, CSS3, JavaScript, Node.js, React.js, Angular, D3.js, Docker

Tools & Platforms: Azure (Data Factory, Synapse, Databricks, Data Lake), AWS (EC2, S3, Glue, Athena, CloudFormation), GCP (BigQuery, Pub/Sub, Dataflow), Kubernetes, Terraform, Jenkins, GitLab CI/CD, GitHub Actions, Cosmos DB, Redis, Power BI, Datadog, Jira, Git, GitHub, Eclipse, Apache Tomcat, Postman, Unix, Linux, Windows, Spring Boot

PROFESSIONAL EXPERIENCE

Software Engineer

University of Florida

August 2024 – Current

• Designed and deployed high-availability architectures using **AWS EC2, ELB, Auto Scaling, and Lambda**; built **ETL pipelines** with **AWS Glue**, transferring data into **S3** and **Redshift**, and managed large data transfers via **AWS Import/Export**.

• **Developed RESTful microservices** using **Python (Flask)**, with **Cassandra** schema design and integrations with **DynamoDB, MySQL, and Kafka**; built ETL services for **Kafka queues** and **Hive tables**, supporting real-time and batch data processing.

• **Automated CI/CD workflows** using **Jenkins, Ant, and Maven**, reducing deployment time by **60%**; followed **Agile/Scrum methodologies**, used **JIRA, Stash/Git**, and contributed to full-stack application development.

Data Engineer

February 2021 – November 2022

Tata Consultancy Services

• **Designed and orchestrated data pipelines** using **Azure Data Factory, Spark SQL, T-SQL, U-SQL, and Databricks** for scalable ingestion and processing into **Azure Data Lake, Azure SQL, and Azure Synapse**; leveraged **Airflow** with **KubernetesExecutor** and **CeleryExecutor** for distributed workflow management.

• **Integrated Google Cloud services** for real-time data processing: ingested streaming data from **Google Pub/Sub** into **BigQuery** using **Cloud Dataflow** and **Python**; developed REST APIs with **Node.js** for data interaction and cached application-specific data using **Redis** for performance.

• **Built analytics and reporting solutions** with **Power BI (DAX, Microsoft Fabric integration), Cosmos DB, and Event Hubs**; deployed infrastructure using **Terraform**, created real-time dashboards in **Datadog**, and defined **SLOs/SLAs** to ensure data reliability.

System Engineer

July 2020 – January 2021

Tata Consultancy Services

• **Designed and deployed AWS infrastructure (VPC, S3, IAM, CloudWatch)** to support scalable cloud applications; implemented automation for monitoring (CloudWatch alarms), data archiving (**Glue, Athena**), and **CI/CD** pipelines using **Bash**.

• **Developed and tested ETL pipelines** using **Go, Python, and Docker**; built integrated test environments with **SQL Server, Cassandra**, and remote servers; created internal **monitoring tools** in **C# (Windows Forms)** to streamline **microservices debugging**.

• **Optimized database performance** across **MySQL and Aurora PostgreSQL**; led **performance tuning, query optimization, and cost-saving initiatives**, including redesigning a **derivatives trading platform** that reduced storage expenses; collaborated via **Git, Jira, and Confluence**.

PROJECTS

Exercise Recognition and Posture Analysis

Tech Stack — Python, Computer Vision, Deep Learning, PyTorch, MediaPipe

Developed a pose **classification model** using **PyTorch, MediaPipe, and Computer Vision** techniques to detect exercise postures; optimized **video frame processing** and **data standardization**, reducing **detection latency by 35%**.

Car-Resale Value Prediction

Tech Stack — IBM Watson, Python, Kaggle, Machine Learning

• Designed a **user-facing ML model** using **IBM Watson and Python** to predict **car resale values** with improved accuracy, trained on a **Kaggle dataset** with relevant market features.

Reddit-like Microservices Application

Tech Stack — Go, ProtoActor, REST API, Microservices

• Developed a **Reddit-like application** in **Go** using **ProtoActor** and a **microservices architecture**, enabling features like **posting, commenting, and voting** through scalable **REST APIs**.

Black and White to Color Image Conversion

Tech Stack — Python, OpenCV, Deep Learning, Caffe

• **Built a deep learning model** in **Python** with **OpenCV** and **Caffe** to **colorize black-and-white images**, leveraging **pre-trained CNNs** for realistic and high-fidelity color reconstruction.