MUGESH SP

Dublin | P: +353 877025709 | sp.mugesh.25@gmail.com|
GitHub: https://github.com/mushiboy | LinkedIn: https://www.linkedin.com/in/mugeshsp/
Website: https://www.spmugesh.com
Visa Status: Stamp 1G (Exp: 27/11/2024)

Summary:
Motivated Computer Science graduate skilled in Python, Java, Swift and JavaScript, proficient in Cloud, Distributed Systems, Full Stack, iOS Development and Machine Learning. Holds certifications in Machine Learning, Statistics, Web Application, and Computer Science and also an **AWS Certified Cloud Practitioner**. Proven history of designing and optimizing data pipelines with real-time monitoring solutions. Collaborative and proficient in Agile and Scrum methodologies. Eager to contribute to the Dynamic team.

EDUCATION

M. Sc. Computer Science (Conversion), University College Dublin / *Sep 2022 – Jul 2024.*
Cumulative GPA: 3.63/4.2; 2H1
Relevant Modules: Software Engineering, Data structures and Algorithms, Web App Development, Python OOP, Distributed Systems, Machine Learning, Cloud Computing.

B. Tech. Chemical Engineering, National Institute of Technology, Calicut, Kerala India / *Jul 2017 – Jul 2021.*
Cumulative GPA: 8.35/10; First Class with Distinction (1:1 Honours equivalent)
Relevant Modules: Optimisation, Computer Programming

SKILLS

- **Technical Skills**:
    - **Programming Languages**: Python, JavaScript, TypeScript, Java, Swift
    - **Database**: SQL, MongoDB, PostgreSQL
    - **Front End:** Tailwind CSS, React, NextJS, React Spring, HTML, CSS
    - **Backend:** Django, RESTful APIs, Flask, NodeJS, Flask, Spring Boot, Kafka, PySpark
    - **Orchestration Tools**: Docker, Kubernetes, Jenkins, Postman, Airflow, DataDog
- **Soft Skills**: Teamwork, Problem Solving, Adaptability, Practical Application.
- **Languages:** Fluent in English, Tamil; Conversational Proficiency in Malayalam, Hindi; Beginner - German

WORK EXPERIENCE

Systems Engineer (Data Ops Engineer), Tata Consultancy Services | Hyderabad, India | *Aug 2021 – Aug 2022.*
Client: Zoro Tools, Grainger USA
- Designed and optimised 10+ Apache Airflow data pipelines for seamless data flow.
- Enhanced data quality, reducing errors by 30%.
- Automated data pipelines, reducing daily errors by 60% and improving accuracy by 15%.
- Commended by Zoro's CTO for exceptional performance.
- **Tech Stacks:** Apache Airflow, Terraform, Google Cloud Services, Python, DataDog.

AWARDS AND ACHIEVEMENTS

- **UCD Advantage Award**
  Acknowledged by UCD for outstanding engagement in co-curricular activities, including teaching Computer Science in Myanmar and supporting UCD students as a demonstrator, fostering skill development and academic success.

CERTIFICATIONS

- Amazon Web Services (AWS) Certified Cloud Practitioner (Feb 2024)
- The Complete 2023 Web Development Bootcamp – Udemy (Dec 2022 – Feb 2023)
- MIT MicroMasters in Statistics and Data Science (4/5 Completed)
- CS50: CS50's Introduction to Computer Science (Sep 2019 – Jan 2020)

PROJECTS

Rent Hub (Ongoing Personal Project)   **May 2023 – Current**
- Spearheading the development of Rent Hub, a web-based house rental platform.
- Implementing front-end components with NextJS to deliver a responsive user interface, while leveraging Django and Python for robust back-end functionalities.
- Designing and implementing scalable architecture for optimal user experience and security.
- **Tech Stacks:** Python, Django, NextJS, React, Tailwind CSS, JavaScript, MongoDB

Quiz Quest (Distributed System Web App) [Code]   Dec 2023 – Jan 2024
- Headed front-end development and backend integration, ensuring a seamless user experience.
- Developed various services with Java Spring Boot, implementing endpoints, and real-time communication with WebSocket.
- Designed and developed ReactJS and Tailwind-based frontend for visually appealing and efficient communication.
- Contributed to the architecture design of the distributed system.
- ***Tech Stacks:*** Java, Spring Boot, Kafka, React, Tailwind CSS, MongoDB

Health Insight: Data Warehouse Management Project   Dec 2023 – Dec 2023
- Developed a scalable cloud solution using AWS for healthcare data warehousing and visualization.
- Utilized AWS services (S3, Glue, Redshift, QuickSight) for storing, transforming, and analyzing medical datasets.
- Focused on cardiovascular analysis using the "Indicators of Heart Disease" dataset from Kaggle.
- Created an intuitive dashboard enabling users to interact with data seamlessly.
- ***Tech Stacks:*** AWS, Python, GitHub, PostGreSQL, Amazon Quickshift

Generating itinerary based on busyness (Web App)   Jul 2023 – Aug 2023
- Designed, led and implemented architecture for the itinerary generation web application in 6-person team.
- Engineered an automated itinerary creation algorithm, transitioning from a basic greedy approach to a refined genetic algorithm, achieving 30% better task allocation efficiency.
- Implemented backend using Django and Developed 10+ RESTful API's required for the web applications and conducted tests for the same.
- ***Tech Stacks:*** Python, React, Django, TensorFlow, HTML, CSS, JavaScript

Dublin bikes application (Software Engineering Project) [Code]   Apr 2023 – Jul 2023
- Led UI design and spearheaded JavaScript front-end work, integrated Google Maps API, addressed challenges, optimised CSS, and successfully implemented features like marker clustering and route display.
- Utilized Flask for Backend Operations and AWS to scrape data and train ML model.
- Ensured agile practices for effective task distribution and progress tracking.
- ***Tech Stacks:*** Python, Scikit-learn, HTML, CSS, JavaScript, Flask, MySQL, AWS

Prediction model for paint pigment mixtures [Code]   Sep 2020 – Jul 2021
- In my B. Tech major project, we developed a colour prediction system.
- This system accurately predicts two colours based on input and suggests the required composition to achieve the desired output colour.
- ***Tech Stacks:*** Python (CatBoost, Pandas, NumPy, Matplotlib, TensorFlow), Bootstrap

Apartment database management system   Dec 2019 – Jan 2020
- As part of the CS50 course, I successfully completed an Apartment Database Management project.
- This involved the implementation of a comprehensive Database Management System using a combination of front-end and back-end technologies.
- ***Tech Stacks:*** Bootstrap, Python, Flask, HTML, CSS, JavaScript.

Connect4 iOS Game Development: [Code]   Dec 2023 – Dec 2023
- Developed immersive Connect4 game for iOS using Swift and Objective-C.
- Integrated dynamic animations with 'UIDynamicAnimator' and 'DiscBehavior' for realistic disc movements.
- Implemented intuitive touch and swipe gestures using UIKit, enhancing user interaction.
- Introduced replay functionality for users to review and enjoy past game sessions.
- Leveraged Core Data for efficient data storage and seamless game session management.
- ***Tech Stacks:*** Swift, UIKit, CoreData

Weather iOS App [Code]   Nov 2023 – Nov 2023
- Led the development of a feature-rich SwiftUI weather application, providing users with real-time weather data, air pollution information, and 5-day forecasts.
- Implemented SwiftUI for a modern and responsive user interface, integrating async/await operations for smoother data fetching and UI responsiveness.
- Enhanced user experience with interactive map features, allowing users to explore weather details through tap gestures. Implemented a search bar for convenient location-based weather information.
- Introduced a detailed view, presenting comprehensive weather information and air quality forecasts for the next five days. Integrated a line chart to visualise the Air Quality Index (AQI) trends.
- ***Tech Stacks:*** Swift, SwiftUI, Core Location, OpenWeather API, Swift Charts