

# Spurthy Mutturaj

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## EDUCATION

### Master of Science in Information Technology

Arizona State University, Tempe, Arizona

Expected Dec 23

GPA (4.0 /4.0)

**Relevant Coursework:** *Advanced DBMS, Data Visualization, Middleware Programming, Unix and Shell, Cloud Architecture (AWS), Advanced Operating Systems.*

### Bachelor's in Information science and Engineering

Visvesvaraya Technological University, Bangalore, India

May 21

GPA (7.9 /10)

**Relevant Coursework:** *Data structures and Algorithms, Object Oriented Concepts, Computer Networks, Machine Learning, Software Testing.*

## SKILLS

**Languages:** Python, HTML, CSS, SQL, JavaScript, C, C++, PHP, Adobe ColdFusion Markup Language.

**Tools/Technologies/Frameworks:** Tableau, Git, Flask, Bootstrap, Node.js, Jenkins, XAMPP, Flask, Docker, Kubernetes.

**Database:** MongoDB(NoSQL- JSON format), MySQL, CouchBase.

## ACADEMIC PROJECTS

### Cloud Infrastructure Design and Deployment using AWS

May 2023

- Comprehensive knowledge of cloud computing concepts and AWS global infrastructure, with a focus on virtual networking, storage solutions (**S3**, EBS, Glacier), and security best practices (**IAM**, encryption, network security),
- Configured **VPCs**, subnets, and routing tables for efficient virtual networking in AWS environments.
- Implemented an Application Load Balancer leveraging Elastic Load Balancing and utilized Amazon **EC2** Auto Scaling to optimize application scalability and availability. Databases(**RDS**, DynamoDB). Converted applications to microservices.
- Deployed a diverse array of AWS services including Amazon EC2, **Auto Scaling Groups**, AWS **Lambda**, RDS, Systems Manager, CloudWatch, S3 for static website hosting, EFS for scalable file storage. Followed DevOps Principles.

### Online Banking Website

Dec 2022

- Engineered the backend of an Online Banking System utilizing **MVC** Architecture, incorporating functionalities such as login and logout mechanisms and **client server** architecture.
- Employed **JWT** Token-based user authentication for enhanced security and protected access to the application. Utilized **MongoDB** for data storage and leveraged Mongoose for database queries, ensuring efficient data management.
- Designed and tested 15+ robust **RESTful API** for seamless CRUD operations using **Postman**.

### Vaccine Management System

Mar 2022

- Designed a schema using ORM and **ER diagrams** to define project entities and requirements, optimized data organization and accelerated development timeline. Formulated 5 queries for demographic analysis of vaccination and infections statistics.
- Developed a relational database system using **SQL** on SQL Server Management Studio to automatically allocate a vaccine to an individual based on age using 2 **triggers**, 2 **stored procedures**, and 1 **user-defined functions**.

### Restaurant Recommendation System for Business and Users

Jun 2021

- Built an application to recommend restaurants to users using Natural Language processing (**NLP**) and **Gensim**.
- Used **Cosine Similarity** to match user profile against all the business profiles, providing a score from 0 to 1.
- Stored close to 500 user and business profiles, that are created after filtering and pre-processing the dataset, in MongoDB.
- Implemented a UI using **HTML**, **CSS**, and **Flask** to allow users to interact with the system using a unique user-id.
- Authored and **published** an international research paper in IJIEEB (<http://www.mecs-press.org/ijieeb/ijieeb-v13-n3/v13n3-3.html>)

## PROFESSIONAL EXPERIENCE

### Arizona State University, Tempe, AZ: Web/Software Developer

Mar 2022 - Present

- **Developed** and maintained 100+ visually stunning web pages using HTML, CSS (Bootstrap), and **WordPress CMS** resulting in a 25% increase in user engagement.
- Collaborated with a 3-member team to migrate the department's 120+ page website from custom to university standard theme.
- Engineered a contact management system using **CFML**, **JavaScript**, **jQuery** and **AJAX**; Attained an 80% reduction in real-time data generation and display duration. Incorporated **Agile** methodology.
- Identified, eliminated, and updated unused source code across **50+ applications** to optimize server storage by 5% and addressed potential security vulnerabilities. and the University uses these apps for more than 20,000 students.
- Converted **jQuery** UI and jqGrid to Fomantic UI and **DataTables**, enhancing user experience.

### UXL Technology Academy, Bangalore, India: Technical Course Content Creator

Jun 2020 - Oct 2020

- Wrote technical content using **Python** and **Java** programs for an online coding academy used to teach K-12 education.