

## EMY VARKEY

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### SOFTWARE ENGINEER

Java Developer • 3+ Years Experience • REST-API • Spring MVC • Microservices • Hibernate

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### EDUCATION

Cochin University of Science and Technology (CUSAT)  
B.Tech In Electronics And Communication | CGPA - 7.5

Cochin, India  
June 2014 - April 2018

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### PROFESSIONAL PROJECTS

#### GST - Goods and Services Tax

The Goods and Services Tax (GST) is a value-added tax imposed on most goods and services sold for domestic consumption. This project focuses on designing and implementing solutions to facilitate returns filing for taxpayers. It integrates data from other government bodies, automatically populating it into the respective GST forms, thus simplifying the process for taxpayers to view their tax details in one place.

GST is one of the largest projects developed and maintained by Infosys Limited. This software is developed for the Government of India and is used by all small and large businesses in India. Throughout my career at Infosys, I have contributed to this project across various roles, leveraging my expertise to enhance the system's functionality and user experience.

My primary responsibilities have involved working with GST Return Forms - GSTR-1 and GSTR-3B. GSTR-1 details outward supplies made during the tax period, while GSTR-3B serves as a monthly summary return used to declare GST liability and pay off such liability.

### EXPERIENCE

#### Technology Analyst | Infosys Limited

Bangalore, India  
April 2022 - June 2022

As part of this role, I prepared technical and functional design documents and collaborated with internal architects and business analysts to review and finalize these documents.

**Search Taxpayer Module:** Implemented the Search Taxpayer module, which is used to find all taxpayer information for businesses. The tool, created using Java, takes in a GST Identification Number and provides registered information about the company. This module includes error handling and input validation capabilities.

**API Development:** Developed microservices architecture based Java applications using the Spring and Hibernate frameworks. Created G2B (Government to Business) and G2G (Government to Government) APIs that implement new functionalities, ensuring adherence to quality guidelines and recommendations.

#### Senior System Engineer | Infosys Limited

Bangalore, India  
April 2021 - March 2022

In this role, I worked closely with the QA team, business analysts, and other developers, conducting code reviews with peers and architects.

I actively participated in software solution development and collaborated with peers to define the system architecture roadmap.

**Interest Computation software:** Collaborated in the development of the Interest Computation software used for GSTR3B filing and worked on the auto-population of interest on the GSTR-3B form. Implemented checks for validating if the user input value is within a threshold margin of the auto-populated interest value and handled errors for validation failures.

**Tax Liability Breakup:** Implemented a new feature called Tax Liability Breakup where taxpayer can furnish the break-up of payments made towards GST liability in GSTR-3B for multiple tax periods.

**AutoPopulation of GSTR3B Data:** Collaborated with team to implement auto-population of GSTR-3B data from the GSTR-1 forms. Data from more than a dozen forms were consolidated and mapped to the GSTR-3B table as part of this feature.

**Threshold Validation:** Implemented checks for validating if the user input value is within a threshold margin of the auto-populated value for different tables of GSTR-3B.

**Nil File Check:** Implemented the Nil File Check functionality, preventing taxpayers from opting for Nil Filing in specific use cases, such as when there is interest carry-over from previous tax periods.

## **System Engineer | Infosys Limited**

Bangalore, India  
*August 2019 - March 2021*

In this role, I attended daily standups and provided updates on my tasks. I analyzed, designed, developed, troubleshoot, and debugged software programs for assigned functional areas based on requirement documents provided by the client and business analysts. I performed unit testing and partnered with our DevOps team to support CI/CD pipelines in Jenkins.

**HSN Search Service:** Implemented the Harmonized System of Nomenclature (HSN) based search service in the GST Portal.

**QRMP (Quarterly returns Monthly Payments):** Quarterly Returns Monthly Payments is a new feature where taxpayers can opt for quarterly filing and monthly payment. I collaborated with other teams to implement this functionality.

**Database Validations:** Implemented various functional checks and database validations. Prepared dummy data and provided walkthroughs and demos of the prototype to clients and internal team members.

## **Engineering Trainee | Infosys Limited**

Mysore, India  
*March 2019 - July 2019*

As part of my role, I have received extensive training in Python programming, Object-Oriented programming paradigm (OOPS concepts), computer algorithms and data structure and Relational Database Management System (RDBMS) using Oracle SQL as part of the standard Infosys generic training. In addition to this, I also received JAVA based full stack development training as part of specialized training for my role.

## **ACADEMIC PROJECTS**

### **Fraud Detection in Auto Insurance Claim (Individual Project)**

*December 2018*

Designed and developed an analytical and modeling framework to predict fraud in auto insurance claims. Our project considers factors like demographic data, policy information, claim details, and vehicle related features to determine the chances of a claim being fraudulent.

### **Face Detection and Recognition System (4 Members)**

*March 2018*

Designed and developed an efficient high-speed real time face detection and recognition software.

Our solution achieved 87.5% test accuracy when evaluated with the ALFW (Annotated Facial Landmarks in the Wild) dataset with 2k faces exhibiting a large variety in appearance (e.g., pose, expression, ethnicity, age, gender) as well as general imaging and environmental conditions for face detection and similar results for face recognition for a smaller dataset of 200 images of different team members.

The GSM-Controlled Irrigation System enables users to remotely operate their irrigation motor switch via SMS commands from a registered mobile number. With features like user authentication, real-time status updates, and an energy-efficient design, this project provides a cost-effective and scalable solution for efficient water management in agriculture.

### SKILLS AND CERTIFICATIONS

#### Programming Languages and Technical Skills:

Proficient in Java and Python. Developed microservices architecture-based Java applications using Spring and Hibernate frameworks.

Performed unit testing using JUnit to ensure software quality.

#### Database Management:

Skilled in managing relational databases using Structured query language (SQL).

Certification of course completion in Oracle SQL Training offered by Besant Technologies, a registered partner of Oracle Workforce Development Program and Microsoft Silver Learning.

Experienced with Hibernate ORM, a powerful object/relational mapping framework for Java.

#### Software Development Methodologies:

Collaborated with teams utilizing agile methodologies. Familiar with sprint ceremonies such as Daily Standup Meetings, User Story Refinement, Project Estimation, and Sprint Retrospective.

Well-versed in tools like Jira and Confluence for work management and documentation.

Collaborated with business analysts to refine requirements, break them down into development tasks, estimate effort, and plan milestones and deliverables using JIRA.

#### Version Control:

Competent with Git and SVN for collaborative software development, employing industry-standard branching strategies and conducting thorough code reviews.

Familiar with code quality control tools like SonarQube and coverage checks.

#### Documentation and Collaboration:

Interacted with internal architects and business analysts to finalize TFD/Design documents.

Prepared detailed technical documents to guide the development process.

Worked closely with team members to ensure timely achievement of project goals.

Prepared comprehensive release notes to document new features, enhancements, and bug fixes for each software release, ensuring clear communication with stakeholders and users.

#### Cloud Computing:

Experience working in Jenkins, an open source continuous integration and deployment (CI/CD) automation software. Jenkins was used to deploy projects to AWS using CI/CD workflow pipelines.

#### Data Analytics and Data Visualization:

Proficient in Data science concepts. Experience working in machine learning based projects in Python using packages like Numpy for fast mathematical operations and Pandas for data processing and Matplotlib for plotting graphs.

Certification of course completion in Data Science with Python Training offered by Besant Technologies, a registered partner of Oracle Workforce Development Program and Microsoft Silver Learning.

Skilled in Data visualization and analysis using Tableau. Certification of course completion in Tableau Training offered by Besant Technologies.