

# JAI KISHAN TIMMAPATRUNI

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## WORK EXPERIENCE

### Software Engineer Intern, Vitg Corp - Maryland, Baltimore, USA

Sept 2023 — May 2024

- Collaborated with cross-disciplinary teams to implement a robust Kibana dashboard on AWS, emphasizing quality and scalability. This collaboration ensured that all features met cross-functional requirements and improved overall user experience.
- Implemented efficient API endpoints following industry best practices, which significantly enhanced backend communication and system performance, resulting in a more responsive and reliable application.
- Utilized React to build and maintain intuitive and user-friendly web applications. Focused on high code quality, implementing scalable front-end features, and ensuring seamless integration with backend services.
- Designed and implemented an efficient document submission and organization system within Confluence. This system streamlined workflows, facilitated better document management, and boosted team productivity by enabling quicker access to critical information.

### Programming Analyst, Cognizant- Bangalore, Karnataka, India

Feb 2021 — May 2022

- Worked with a cross-functional team to design, develop, and maintain software solutions for the Digital Sales Support Apps (DSSA) team, ensuring high quality and scalability of features.
- Built and maintained user interfaces using React, JavaScript, HTML5, CSS, and Bootstrap to support Moderation, Appeals, and Support team members in managing users on the platform. Emphasized user-friendly design and seamless functionality.
- Implemented RESTful APIs following best practices in Java and Node.js, enhancing backend communication and ensuring SLA compliance. Handled escalations and incident resolution efficiently, contributing to the stability and reliability of distributed production systems.
- Spearheaded the design and development of a Policy Administration System for the security Operations group, using Object-Oriented concepts and microservice architecture. Developed frontend components with HTML5, CSS, and Bootstrap, and backend services with Java, Spring Boot, and Servlets, utilizing an internal H2 database for data storage.

## TECHNICAL SKILLS

**Programming languages and Backend Technologies:** Java, Python, C, C++, Spring, Spring Boot, Go, Node.js,

**Web, Cloud and Databases:** React, HTML, CSS, JavaScript, Bootstrap, AWS, Oracle, SQL,

**Platforms, Tools, and Operating Systems:** Git, Matlab, pip, npm, Tableau, Windows, Unix, macOS, Confluence, Agile

## PROJECTS

### Text Retrieval Engine

Feb 2024 — May 2024

- Problem: Enhancing search accuracy by efficiently retrieving and ranking relevant documents based on user queries.
- Approach: Developed a retrieval engine with pre-processing steps and tf-idf algorithms to calculate document weights.
- Outcome: Successfully implemented a robust system that accurately identifies and ranks the most relevant documents.
- Technologies and methods used: Java, Maven, Jsoup, Data Structures, tf-idf algorithms.

### Aid Data Analysis - [Live](#)

Sep 2023 — Dec 2023

- Problem: Analyzing correlations to understand International Aid data distribution and inform funding decisions.
- Approach: Conducted thorough data cleaning and collection processes to ensure reliability. Employed data visualization techniques, including Network Graphs, Stacked Bar Charts, and Sunburst Charts, to depict trends and correlations from 1991 to 2010.
- Outcome: Generated comprehensive insights into global financial aid distribution, aiding policymakers and funding agencies in discerning the needs of recipient countries and optimizing fund allocation strategies.
- Technologies and tools used: Python (Pandas, NumPy, Matplotlib, Seaborn), Tableau, HTML, CSS, Bootstrap, GitHub

### Secured and Encrypted Distributed File System

Sep 2022 — Nov 2022

- Problem: Designing a secure and encrypted peer-to-peer file system with features such as read, write, delete, create, and modify operations, ensuring data confidentiality and preventing unauthorized access.
- Approach: Implemented a P2P file system architecture using a Centralized Directory for managing requests and facilitating direct file transfers between peers. Employed AES Algorithm and Python for encryption and decryption processes.
- Outcome: Successfully developed a robust SEFS, enabling secure file operations while maintaining data confidentiality. The system ensures the prevention of malicious activities and facilitates encrypted peer-to-peer file transfers, enhancing data security.
- Technologies and methods used: Python, AES algorithm

## EDUCATION

### University of Maryland Baltimore County | *Masters in Computer Sciences (GPA: 3.518)*

Aug 2022 — May 2024

**Relevant courses:** Information Retrieval, Data Visualization, Design and Analysis of Algorithms, Software Reverse Engineering, Fundamentals of Software Testing.

### GITAM University | *Bachelors in Computer Science (GPA: 8.21)*

June 2017 — Jun 2021

**Relevant courses:** Database Management Systems, Data Structures and Algorithms, Web Development, Machine Learning, Probability and and Statistics.