# VIVEK VENKATESHPRASAD

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## Expertise

**Programming Languages**: Python, JavaScript, Java, SQL, NOSQL/MQL, HTML5/CSS

**Technologies/Frameworks**: Flask, Django, FastAPI, numpy/pandas, Apache Spark(PySpark), OpenCV, Pytorch, Tensorflow, Flutter, GCP, AWS, Linux, Jenkins, Git, Bootstrap, React, Selenium

**Databases**: MongoDB/Mongo Atlas, Firestore, MySQL, PhpMyAdmin, Oracle, PostgresSQL, DynamoDB

## Education

**University of California, Riverside**                                    **Sep 2023 – Dec 2024**
*Master of Science in Computer Science - GPA: 3.9/4*                      *Riverside, California*

**B.M.S College of Engineering**                                          **Sep 2017 – Aug 2021**
*Bachelor of Science in Information Science - GPA: 3.6/4*                 *Bengaluru, Karnataka, India*

## Experience - 2.5 years

**Cisco**                                                                 **Feb 2021 – Aug 2023**
*Software Engineer*                                                       *Bengaluru, Karnataka, India*

- Engineered and deployed over 6 advanced tools and solutions for Cisco's Business Critical Services 3.0 SaaS offering, delivering operational insights into network devices and driving over $7 million in revenue.
- Designed optimized algorithms to boost RESTful API performance, reducing processing time by 73% through advanced multi-threading, indexing, and data sharding techniques.
- Collaborated with data scientists to identify of key configuration themes across devices using ML/AI (LSTM/BERT/LLM) models to recommend optimal configurations which reduced customer tickets by 30%.
- Led a team of 4 in migrating a CPU-based ML prototype into a GPU-accelerated cloud app using OpenStack, S3, MongoDB and PyTorch, reducing model training time for 1M+ network device configurations from 8 hours to 1 hour
- Worked on an automated association rule mining and OS specific best practices parsing engine using Java (Apache POI) and Python (openpyxl, RegEx, BeautifulSoup) to extract structured data from a corpus.
- Partnered with cross-functional teams to design robust REST API microservices using Flask and FastAPI, delivering seamless, real-time customer, metrics and forecast data.
- Streamlined CI/CD pipelines to automate build, test, and deployment processes using Docker, Jenkins, SonarQube, OpenShift/GCP that decreased prototype to production time by 40%.
- Developed custom queries and triggers in MongoDB Atlas to optimize document storage and retrieval, boosting throughput, improving scalability, and reducing latency, which doubled operational efficiency.
- Followed Agile Methodology and addressed bugs in applications using JIRA and used Git for version control.
- Regularly organized and hosted technical and non-technical events for a global audience of 1,000+ attendees, driving engagement and knowledge-sharing across diverse groups.

*Software Intern*
- Redesigned UI using Javascript/Typescript to display interactive charts and figures and to support multiple themes.
- Developed Rest APIs in Django/Flask for historical data trend analysis and wrote unit test cases using JUnit/pytest.
- Improved structure, readability and reusability of legacy code by following coding best practices and guidelines.

## Projects

**Patronus - An app to help people with dementia** | *React Native, Flask, LangChain, Qdrant, Gemini, RAG*      **2024**
- Co-developed an award-winning app at Cerebral Beach 2024(L.A.'s largest Gen AI hackathon). The app, designed as a personal assistant and memory bank for individuals with dementia, received top honors, including "Best Zero to One Startup," "Most Responsible Use of AI," and "Most Innovative Project."

**Movie plot generation using predictive text** | *Large language modelling(LLM), Pytorch, Sentiment Analysis, RNN* **2024**
- Developed a movie plot generation application using predictive text as part of my AI course. Designed to generate hit movie ideas leveraging the IMDB top movies dataset

**Wander Wisdom - travel search engine** | *React-Javascript, Python, Geo Spatial data handling, Web scraping*   **2024**
- Created a travel destination search engine utilizing BERT/Pylucene for natural language processing, based on data scraped from Reddit. Integrated with Maps API to accurately display the precise location of destinations along with relevant travel information.

**P.I.G.L.E.T** | *React Native, Javascript, Google Firestore/Firebase, Google Cloud Platform*                  **2021**
- "Platform for Issues and Grievances Laid out by Emerging Technologies". Created a progressive web application that users can report civic problems in real time that gets directly reported to the authorities responsible for handling them.

**Automatic Appraisal form application** | *Java, JDBC, WAMP stack development*                                **2020**
- Modernized the appraisal form submission process by developing a full-fledged application. Improved efficiency and user experience by replacing the outdated, manual process with an automated system. Successfully launched the application for use in the academic year 2020-21.