VISHNU SHREERAM M.P.

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Carrer Objective

I aim to build efficient, real-world solutions. Seeking a role to apply my strong foundation in Math and Machine Learning while growing technically and contributing to innovative projects.

Education

Indian Institute of Technology, Palakkad Expected May 2026

*Bachelor of Technology in Data Science (**CGPA: 9.53 / 10**)* *Palakkad, Kerala*

- **Relevant Coursework:** DSA (Python), Optimisation, Artificial Intelligence, Database Systems, Computer Systems for Data Science, Discrete Maths, Probability & Statistics, Linear Algebra, Multivariable Calculus, Machine Learning, Data Mining, Data Analytics. **Ongoing**-*Deep Learning, MLOps, Big Data Lab, NLP*

Experience

Laboratory of Statistical Artificial Intelligence and Machine Learning May 2024 – July 2024

Summer Intern *Palakkad, Kerala*

- Worked under Associate Professor Narayanan C. Krishnan at IIT Palakkad, on optimizing Bosch's SMT assembly line for PCB production, handling 32 different PCBs with a variety of 200 unique components
- Focused on maximising assembly line efficiency by optimising the pick-and-place mechanism.
- Developed various approaches to determine the optimal Product Grouping, feeder arrangement and pick-up cycles, addressing real-world challenges faced by Bosch.
- Genetic Algorithms, Mixed Integer Linear as well as Non-Linear Programming Techniques were used.

Projects

VoicePilot - Voice Control System | *Python, FastAPI, uv* | *Github Repo*

- Developed a full-stack voice control system using a SaaS workflow with Python FastAPI microservices & RESTful APIs. Enabled users to control browser and system actions and monitor hardware through voice commands.
- Integrated Playwright for advanced browser automation, allowing voice-controlled web navigation.
- Designed a modular system with dedicated services for transcription, browser control, and hardware monitoring.
- Containerised the project with *uv* and ensured reliability with robust error handling, structured logging, and clean code practices using JustFile, Ruff, YAML, and TOML for configuration management.

ShopTrends – Data Analytics for Retail Optimization | *Python, SQLite, FastAPI* | *Github Repo*

- Developed a dashboard for shop owners to track sales trends & revenue distribution with live database updates.
- Implemented Association Rule Mining to identify purchasing patterns and recommend profitable bundle offers.
- Built a real-time transaction simulation system to analyze customer purchase behaviour dynamically.

Stress-Sleep Disorder Prediction | *Python, Streamlit* | *Github Repo*

- Developed and optimized ML models to predict stress and sleep disorders using health and lifestyle data, leveraging hyperparameter tuning.
- Deployed the solution online with Streamlit for real-time predictions.(Try it here!)

Central Instrumentation Facility (CIF) Database Management System | *PostgreSQL,Python* | *Github Repo*

- Developed a comprehensive Slot Booking Database Management System using PostgreSQL.
- Incorporated 25 necessary triggers, functions & procedures simulating the requirements of CIF at IIT Palakkad
- Collaborated in a team of 4 to implement a simple, intuitive front-end & back-end enabling smooth interaction with the DB for users, including students, faculty, & staff each with customised views tailored to their roles

Technical Skills

Languages: Python, PostgreSQL, R **Libraries worked with**: Numpy, Pandas, Matplotlib, Scikit-learn, TensorFlow
Technologies: Apache Hadoop, Apache Hive, FastAPI, MATLAB, Git, Linux, Jupyter, Vector Databases

Awards and Achievements

Certificate of Academic Excellence 2023,2024

- Certificates awarded by IIT Palakkad for securing the highest CGPA among **first-year** and **second-year** BTech students in Data Science and Engineering in the academic year 2022-'23 and 2023-'24 respectively.