MAITREY VIVEK PHATAK

EDUCATION

Master of Science: Applied Data Science   **(Aug 2025 to Sept 2027)**
College Name: University of Florida

Bachelor of Technology: Information Technology   **(July 2019 to Oct 2023)**
College Name: University of Mumbai

PROFESSIONAL EXPERIENCE

Company: Thapasu Foods, LLP   **(March 2024 to Jan 2025)**
Title: Technical Intern

- Analyzed sales and marketing data using SQL to identify growth opportunities, automating ETL-style reporting pipelines that improved operational efficiency by 20%.
- Designed demand forecasting and data modeling workflows to evaluate new product performance across regions and guide marketing decisions.
- Collaborated with business and engineering teams to ensure adherence to UNSDG's, data accuracy, validate transformations, and document workflows for reporting reproducibility.

Company: Caelum   **(Oct 2023 - Feb 2024)**
Title: Computer Vision Intern

- Conducted surveys on online shopping platforms to analyze brand popularity, translating insights into data-driven recommendations for user experience
- Reviewed academic papers on virtualization and integrated key findings to design a more efficient and scalable virtualization strategy
- Processed large-scale fashion image datasets using modular Spark-based data pipelines to ensure reproducibility and maintainability across iterations
- Applied computer vision techniques to improve object detection accuracy, packaging and deployed models on AWS cloud infrastructure to evaluate real-world performance and data drift

RESEARCH EXPERIENCE

Institution: Atharva College of Engineering   **(Oct 2023 - Feb 2024)**
Title: Research Assistant

- Studied patient and healthcare stakeholder scenarios for PHR document access and used an LLM to expand plausible use cases, with generated scenarios validated by healthcare personnel.
- Designed a privacy-preserving access verification framework using role-based controls and individual confidentiality attributes to protect sensitive medical data.
- Built a PHR system prototype that computes a dynamic Trust Factor based on user role, document sensitivity, and access context to authorize healthcare entities.

PROJECTS

Multi-Agent Deal Negotiation Prototype

- Developed a multi-agent M&A negotiation simulator inspired by Stanford Law's alpha prototype, extending it with Buyer, Seller, and Regulator agents to replicate real deal dynamics
- Implemented valuation models (DCF, comps, synergy sharing) and HHI-based antitrust review, enabling negotiation loops with convergence checks
- Containerized the system with AutoGen orchestration, Docker, and CI testing, documenting architecture, and QA tests for consistent reproducibility across environments

User Data–Based Psyche Modelling

- Analysed user interactions from the Outbrain Click Prediction dataset using PySpark and SQL, uncovering behavioural personas such as planners, novelty-seekers, and impulsive users
- Engineered features and built ETL pipelines around session diversity, recency, and dwell time, applying clustering to identify latent user mindsets
- Built a Power BI dashboard to present insights, highlighting opportunities to improve engagement and retention for business stakeholders, and partnered with analysts to refine KPIs

Data-Driven Approach to Measuring Microbusiness Inclusivity and Economic Resilience

- Integrated real-world datasets from Venture Forward, U.S. Census (ACS), BLS, and FCC Broadband Maps to analyse microbusiness ecosystems
- Engineered key indicators for economic resilience (growth, recovery rates) and inclusivity (diversity, broadband access, education).
- Built composite Economic Resilience and Inclusivity Indexes using Principal Component Analysis (PCA) and weighted scoring techniques.
- Used predictive modelling to forecast future resilience patterns and deployed the final dashboard on Streamlit Cloud.

COMPUTER SKILLS

- **Programming**: C, Java, Python, Solidity,
- **Web Development:** Html, CSS, JavaScript, Node.js
- **Tools and Libraries:** TensorFlow, PyTorch, Firebase, MySQL