Bhavana Vippala

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Portfolio: bhavana19portfolio.netlify.app

Education

- University of Colorado Boulder — Boulder, CO
  Master of Science in Data Science; CGPA: 3.88/4 — 2024 { 2026
- CMR College of Engineering & Technology — Hyderabad, India
  Bachelor of Technology in Computer Science; CGPA: 8.3/10 — 2020 { 2024

Experience

- AI/ML Software Engineer Intern — May,2025 { Present
  PM Accelerator — Florida, US
  - Cut LLM inference latency by 40% by shipping RESTful Flask APIs; scaled to 500+ requests/day with 99.8% uptime.
  - Automated ETL converting 10k+ docs/month into structured JSON, boosting data throughput by 35%.
  - Integrated ChatGPT API + custom ML to improve product performance by 30% and reduce token spend by 25% across 1k+ daily interactions.
  - Built DS pipelines: embeddings (all-MiniLM-L6-v2), clustering (DBSCAN/K-Means with GPU cosine), and BART summaries; added JWT+OTP auth, rate limiting, and Redis caching.
- Python Developer Intern(Data science) — May 2022 { July 2023
  Swecha Organization — Hyderabad, India
  - Developed a Python-based application for real-time bus tracking and arrival time predictions, signifcantly enhancing commuter convenience.
  - Implemented advanced geolocation algorithms, improving the accuracy of bus arrival times by 25%.
  - Integrated live GPS data with a team of four developers, enabling real-time tracking for 200+ buses and improving operational efciency.

Projects

- Virtual Vogue: Deep Learning for Realistic Fashion Try-On | PyTorch, GANs, Difusion, CV:
  - Built a coarse-to-fne VITON pipeline: encoder{decoder coarse generator + mask-guided non-parametric warping + refnement/blending, using pose heatmaps and person segmentation for geometry-aware garment transfer.
  - Beat strong baselines (PRGAN, CAGAN, CRN) on 2,032 test pairs: SSIM +5{8%, IoU +5{17 pp, Inception Score 3.22, with real-time 30 ms GPU inference at 256 ×192.
  - Ablations (NoWarp/NoRefne/NoPose/NoSeg) showed warp as most critical (IoU −17 pp); user study (30 raters, 100 trials/baseline) preferred outputs 88{97% for realism/ft.
- Echolab | Feedback!Hypothesis Mining (Python, NLP, Supabase):
  - Ingested multi-source tickets into Supabase/PostgreSQL; standardized text/meta and embedded 100% of records using sentence-transformers/all-MiniLM-L6-v2 with cosine-sim vector search.
  - Auto-clustered themes via hybrid DBSCAN + K-Means; deduped near-duplicates and produced cluster briefs with facebook/bart-large-cnn, each with representative examples and citations.
  - Cut analysis cycle time from 3{4 weeks to < 48 hours and lifted hypothesis throughput 3{5×by auto triage + clustering + summarization.
  - Implemented RAG lookups to ground hypotheses in known UX patterns/case studies; exported test-ready cards to GrowthBook/Jira for one-click A/B test creation.
- PLATE-TO-HEALTH: A Global Nutritional Journey | Python, Machine Learning:
  - Modeled global dietary patterns using the Global Dietary Database; employed advanced regression with reported accuracy R^2 = 1:000.
  - Analyzed dietary data across demographics and regions for public health insights; set accuracy benchmarks with MAE = 30:5 and RMSE = 25:0.

Technical Skills

- Programming: Python, R, Java, JavaScript, C/C++
- ML/AI & NLP: PyTorch, TensorFlow, scikit-learn, XGBoost, Transformers, LLMs/RAG
- Data/Analytics & Tools: SQL, Pandas, NumPy, Spark, Hadoop, Tableau, Power BI, Git
- Frameworks & Backend: Flask, Django, Node.js, React, Angular
- Cloud & Databases: AWS (EC2, S3), GCP; PostgreSQL, Supabase, MongoDB, MySQL, Snowfake, BigQuery
- Certifcations: Full Stack Data Science and AI | Naresh I Technologies (2023)

Research Papers

- Cardiac Arrest Prediction in Newborns: Published in IJRASET (Paper ID: IJRASET59408)
- Public Opinion Detection: Sentiment Analysis and Data Visualization: Published in IJRAR.org (Reference Number: IJRAR280114)