Ronit Amar Bhatia

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Education

Cornell University Aug 2024 – May 2025

Master of Engineering in Engineering Management

University of California, Davis

Bachelor of Science in Computer Science

Minor in Technology Management

Sept 2020 - June 2024

Experience

Software Engineer Intern, Gallox Semiconductors (Remote)

Nov 2024 – Jan 2025

- Developed automation solutions for power device characterization, improving testing efficiency.
- Designed a real-time data visualization tool for test measurements using Python, improving debugging efficiency during lab evaluations.

Student Research Assistant, Cornell CALS

Aug 2024 – Dec 2024

- Utilized machine learning techniques (k-means clustering, regression models) to analyze crop-based GHG emissions.
- Developed Python scripts to streamline the preprocessing of geospatial crop emissions data, improving consistency across datasets.
- Implemented a clustering algorithm to group crops by emission intensity, enabling more targeted mitigation strategies.

Software Developer Intern. ColentAI (Remote)

Jan 2024 - Mar 2024

- Enhanced generative AI model performance through fine-tuning and hyperparameter optimization.
- Conducted API research and integration to enhance data gathering and model training.
- Developed an automated skill taxonomy generator using natural language processing and keyword extraction.

Data Analyst Intern, Cardinality-AI (Remote)

June 2021 - Sept 2021

- Ingested and transformed structured data using SQL to support machine learning pipelines.
- Performed feature engineering and data validation to improve model response time by 5%.
- Leveraged MATLAB to identify and interpret trend patterns in complex data sets.

Projects

UnClogAI: AI-Powered Workflow Bottleneck Detector [GitHub]

Aug 2025 - Sept 2025

- Developed an AI workflow automation tool using graph analytics to detect bottlenecks and improve process efficiency.
- Designed a multi-agent system with LangGraph and Hugging Face LLMs for predictive insights and risk assessment.
- Optimized data pipelines and graph computations to enable efficient, real-time workflow analysis at scale.

Startup Planner Agent: AI-Powered Strategic Planning Tool [GitHub]

June 2025 - June 2025

- Designed a modular multi-agent architecture using Python to orchestrate local LLM tasks with LLaMA 3 via Ollama.
- Built agent-based workflows to automate startup analysis, including market research, SWOT, and MVP planning.
- Delivered an interactive web app with exportable outputs, enabling offline strategic planning and stakeholder readiness.

Excellensight: AI-Powered Feedback Analyzer, Cornell University [GitHub]

Mar 2025 - May 2025

- Built a custom CNN-BiLSTM-Attention model to classify ChatGPT user reviews and generate insight summaries without using large language models.
- Developed a full NLP pipeline: preprocessing, model training, evaluation, and automated Markdown/HTML report generation.
- Achieved over 98% validation accuracy on 10K+ reviews; reports include key trend summaries and visualizations.

Taskify: AI-Powered Task-to-Team Member Matching [GitHub]

Mar 2025 – May 2025

- Built a custom Transformer model combining embeddings and structured features to predict task-member compatibility with 89.6% accuracy.
- Generated and labeled a synthetic dataset (40K+ samples) using sentence-transformers and feature engineering.
- Deployed a real-time Streamlit app to recommend top-ranked teammates with confidence scores and reasoning logic.

Technical Skills

Programming Languages: Python, C/C++, SQL, Go, JavaScript, HTML, CSS, MicroPython, Lisp, Prolog

Machine Learning & AI Tools: TensorFlow, PyTorch, Scikit-learn, LangChain, Ollama, LangFuse, LangGraph, Strands Agents

Tools & DevOps: Git, GitHub, Docker, VSCode, MATLAB, JIRA, Power BI

Cloud Platforms: AWS (S3, EC2, Lambda, SageMaker, RDS, DynamoDB), GCP (BigQuery, Vertex AI, Cloud Run)