Pragalvha Sharma

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EDUCATION

University of Western Ontario London, Ontario, Canada
Bachelor of Science in Computer Science *September 2023 - April 2027*

Ivey Business School London, Ontario, Canada
Honours in Business Administration *September 2025 - April 2027*

EXPERIENCE

Mely.ai London, Ontario
Full Stack Engineer | `Vue, Docker, PostgreSQL, LLMs, Python, C#` *May 2025 – September 2025*
- Optimized database performance by redesigning embeddings data movement across tables, resulting in a 300% efficiency gain in related workflows
- Improved extraction accuracy by building an AI-powered document refinement workflow, which reduced manual corrections and sped up structuring
- Developed a "Create Auto Rule" guardrail system for extraction, reducing manual interventions and increasing first-pass accuracy
- Resolved production issues end-to-end by triaging customer tickets, reproducing bugs, and shipping fixes to ensure a seamless client experience

Western University London, Ontario
Research Assistant *April 2025 - August 2025*
- Accelerated single-cell RNA-seq analysis by porting the M3Drop package from R to Python, improving speed, usability, and pipeline compatibility
- Improved research reproducibility by integrating Jupyter-based tutorials and examples to onboard students and researchers faster
- Optimized computational performance through vectorized operations and streamlined data handling for large-scale analyses
- Collaborated with Professor Tallulah Andrews on methodology and validation, contributing to a paper (expected December 2025)

Blanc AI London, Ontario
Cofounder | `Next.js, FastAPI, LLMs` *October 2024 - April 2025*
- Built an AI agent to automatically calculate material quantities and generate contractor quotes, reducing time-to-quote
- Deployed to production and adopted by general contractors, generating 10,000+ quotes to date
- Secured funding from Western Accelerator (Morrissette Institute for Entrepreneurship; $12,000)
- Selected by Ripple Ventures for the Ripple X Fellowship, supporting go-to-market and iteration

Infin8 Remote
Full Stack Engineer | `React, Django, PostgreSQL, AWS, LLMs` *April 2024 - August 2024*
- Delivered ERP features for 3+ clients using React, improving front-end responsiveness and usability
- Implemented back-end services with Django and PostgreSQL and deployed on AWS for reliability and scale
- Built a text-to-SQL agent with LLMs to enable natural-language database queries for a mid-sized business
- Collaborated with cross-functional teams to resolve integration issues, improving reliability and speeding deployments

PROJECTS

NASA/NSS Gerard K.O'Neill Space Settlement Contest: Gaia's Hope October 2022 - May 2023
- Earned 1st place globally, outperforming 26,725 students across 19 countries and surpassing 4,567 entries
- Received worldwide recognition through NASA/NSS official page and featured in multiple local newspapers
- Successfully secured $20,000 in grants for participation in the 2023 International Space Development Conference

Arbitrage Bot | `Python, APIs` November 2024
- Developed a bot that identifies positive arbitrage opportunities between Polymarket and sports betting sites
- Automated the process of finding and calculating optimal bets for maximum returns

ERP Generator | `React, Django, LLMs` August 2024 - September 2024
- Co-developed an agentic architecture with Large Language Models to generate enterprise software when given a company's business problem/logic
- Wrote code to generate React Frontend and Django Backend

Text to SQL Agent | `LangChain, PostgreSQL, FastAPI` April 2024
- Developed an AI agent that converts natural language queries into SQL for database interactions
- Integrated with existing ERP system of a medium-sized business to enable non-technical users to query data

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C
Technologies: React, Next.js, Django, FastAPI, Vector Databases, Large Language Models
Databases & Tools: PostgreSQL, MongoDB, AWS, Git, Docker
Interests: Startups, Artificial Intelligence, Storytelling