Adhitya Thirumala

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EDUCATION

University of Illinois Urbana-Champaign

Major: Computer Science + Linguistics — Minor: Mathematics

GPA: 3.82

EXPERIENCE

Digital Main | Machine Learning Intern

May 2025 — August 2025

Expected Graduation: May 2027

- Built an asynchronous agentic retrieval-augmented-generation (RAG) system in Python, orchestrating query decomposition and research across web and internal client data (Slack messages, emails, etc.) using LangGraph
- Utilized FastAPI to create customer-facing production API to stream research process to web client using Server Sent Events (SSE)
- Implemented automated agentic source validation, while integrating images and generating charts or tables into final artifact

Assocation for Computing Machinery at Illinois | Treasurer

March 2025 — Present

- Managed over \$350k of organizational funds for largest CS student organization at Illinois with 1000+ total members
- Migrated accounting and credit card platforms from BILL.com to Ramp to obtain credit limit increase of 2300% and to streamline reimbursements, onboarding, and reporting workflows
- Served as liaison between organization and Siebel School of Computer Science staff to coordinate usage of department-provisioned funds for ACM events such as biannual open house (500+ attendees) and various social events

Freelance | Private Policy Debate Coach

August 2024 — Present

- Mentored 9 students from under-resourced institutions nationwide, identified through extensive high school competitive debate networking, providing strategic coaching and performance enhancement
- Considered past student performances at over 100+ rounds to use data-driven strategies to increase student winrate by 120%
- Coached student to tournament victory at University of Michigan Round Robin Invitational, successfully competing solo against established partnerships in premier national circuit event

SELECTED PUBLICATIONS

Clickbait Classification and Spoiling Using Natural Language Processing (arXiv)

Oct 2022 — May 2023

- Trained transformers-based models on shared task dataset for clickbait detection
- Performed comparative analysis between fine-tuned SLM BERT-based models and Large Language Models on clickbait spoiling task
- Utilized Weights and Biases hyperparameter tuning to achieve $\sim 80\%$ accuracy on shared task
- Results accepted by The 17th International Workshop on Semantic Evaluation: Toronto, Canada 2023

Extractive Question Answering(QA) on Queries in Hindi and Tamil (arXiv)

Oct 2021 — May 2022

- Trained NLP models to perform extractive QA improving performance by 20% over baseline due to modified RoBERTa tokenizer
- Utilized crosslingual dataset provided by competing in online competition hosted by Google
- Received 26th Annual Carnegie Science Award given to 12 top scientists, entrepreneurs, innovators and educators across the city of Pittsburgh for submitted research

PROJECTS

LLM Evaluation Framework for Competitive Pokémon | Developer

September 2025 — Current

- Built Model Context Protocol (MCP) server using Typescript SDK to expose tools and resources for LLMs to play Pokémon
- Created evaluation framework to rank LLMs with ELO system across many battles
- Integrated MCP server with existing battle platform and data provider by developing API parsing library for server communication

matched.lol | Backend Developer

September 2024 — December 2024

- Developed a Java Spring Boot REST API with PostgreSQL database for a platform to pair League of Legends players, implementing Discord OAuth2 authentication and preference-based matching algorithms
- Built comprehensive database layer with complex SQL queries for user filtering and relationship management using serverless PostgreSQL platform (Neon)

SKILLS

Languages: C++, Rust, C, Python, Java, HTML, Bash, LATEX, SQL, Go, Lua, Javascript, Typescript, CSS

Tools: Linux, Git, Vim, Huggingface, Maven, Gradle, SQLite, Docker, PostgreSQL, Vercel, AWS, Oracle Cloud, Google Cloud Platform, Cloudflare (Domain Management)

Libraries: pandas, NumPy, Matplotlib, Tensorflow, pyTorch, Sci-Kit Learn, Swing (Java), Spring (Java), Next.JS, React.JS, Flask, LangChain, LangGraph, FastAPI

Relevant Coursework

Computer Science: Algorithms and Models of Computation, Data Structures in C++, Computer Architecture, Computational Linguistics Mathematics and Statistics: Honors Abstract Linear Algebra, Statistics and Probability I, Introduction to Higher Level Math, Multivariable Calculus, Discrete Structures