

Chun Meng (Amy) Yu

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Summary

Applied AI researcher and former Meta software engineer experienced in LLM application development, RAG pipelines, and AI frameworks. Proficient in Python, Java, and C++.

Portfolio: <https://amycmyu.pages.dev/>

Skills

- **Languages & Frameworks:** Python, C/C++, JavaScript, SQL, Java, React, Next.js, LangChain
- **Concepts:** Machine Learning, Generative AI, LLM Finetuning, API Integrations, Prompt Engineering, Data Pipelining, Vector Databases, Human-Computer Interaction, REST APIs
- **Other:** Mentoring, Communication, Presentations, Problem Solving, Debugging, Prototyping

Work Experience

• Purdue University - Research Assistant

August 2023 – December 2024, West Lafayette, Indiana, United States

- Created an LLM chat agent that could answer questions and analyze data from a large database of domain-specific knowledge. Used LangChain for multi-step reasoning.
- Developed a RAG pipeline for name resolution using OpenAI's text embedding model.
- Finetuned LLMs to generate valid SQL queries from natural language prompts.
- Explored prompt engineering techniques for LLMs to generate output aligned to user needs.
- Led user studies and analyzed data to evaluate system usability and performance.
- Primary author of a research paper published at UIST on using LLMs to interpret and analyze domain-specific data. Presented at the UIST conference.
- Authored a paper accepted by ASSETS on using LLMs to help blind users understand and create 3D models programmatically.

• Meta (Facebook) - Software Engineer (Facebook Search Team)

July 2019 – August 2023, Menlo Park, California, United States

- Worked on Facebook's search engine, on backend systems in Python, PHP, and C++.
- Built and maintained ML models used in the recommendation systems for ranking typeahead suggestions with user interaction data.
- Shipped large-scale systems that improved navigation for millions of users, leading to significant gains in user engagement.
- Designed and shipped the Structured Typeahead Suggestions feature to disambiguate typeahead results with images and snippets.
- Led the development and rollout of the Batch Mentions feature for tagging large user groups and sending scalable notifications to millions of users.
- Owned the Facebook Shortcuts feature, improving discoverability and reliability of the search results and streamlining its internal backend tools.
- Developed scalable evaluation and logging infrastructure to analyze Typeahead performance.
- Mentored interns and managed their cross-functional projects from ideation through launch.

• Facebook - Software Engineering Intern (Data.AI Team)

Sept 2018 – December 2018, Menlo Park, California, United States

- Contributed to Facebook's internal data analysis infrastructure by integrating ML models to the timeseries extrapolation tool.
- Built and shipped a Facebook video recommendation system in a company hackathon. Received Judges' Choice Award and presented to Facebook's CTO.
- **Microsoft - Software Engineering Intern (.NET Runtimes Team)**
May 2018 – August 2018, Redmond, Washington, United States
 - Worked in C++ and C# to develop features for Microsoft's .NET compiler.
 - Developed *R2RDump*, a disassembler for .NET ReadyToRun binaries.
 - Analyzed low-level assembly code to understand the format of binary executables.
 - Contributed to the multi-module compilation feature, allowing bundling of multiple .NET executables into a single optimized executable.
- **Cisco Meraki - Software Engineering Intern (MR Access Point Features Team)**
September 2017 – December 2017, San Francisco, California, United States
 - Developed embedded software for MR access points to enable EAP switchport authentication.
 - Implemented SSCEP-based secure certificate retrieval for access point authentication.
- **IBM Canada - Software Developer Intern (J9 Virtual Machine)**
January 2017 – April 2017, Ottawa, Canada
 - Worked in Java and C++ to develop features for IBM's Java Virtual Machine.
 - Worked on Project Panama to enable native method handles in Java for IBM's JVM (a more secure and user-friendly alternative to JNI).
 - Added new APIs to the Java Core Library to bridge native and managed runtime layers.
- **SAP Canada - Software Developer Intern (Core Infrastructure)**
May 2016 – August 2016, Waterloo, Canada
 - Integrated fingerprint authentication to the SAP Kapsel Logon plugin for hybrid mobile apps.
 - Led the development of a tool to transform user-provided JSON into HandlebarsJS templates.
- **Bank of Canada - Web Developer Intern**
September 2015 – December 2015, Ottawa, Canada
 - Developed a WordPress plugin to track and manage multimedia usage across all Bank of Canada websites.
 - Wrote PHP and MySQL scripts for large-scale data queries and content updates.

Education

- Purdue University, West Lafayette
August 2023 – December 2025
 - Master of Science, Computer Graphics Technology (in progress)
- University of Waterloo
September 2014 – June 2019
 - Bachelor of Computer Science (With Distinction)

Publications

- "FathomGPT: A natural language interface for interactively exploring ocean science data." The 37th Annual ACM Symposium on User Interface Software and Technology. 2024.
- "AllyShape: AI-Assisted 3-D Modeling for Blind and Low-Vision Programmers." The 27th International ACM SIGACCESS Conference on Computers and Accessibility. 2025.