Minh (Tuan Minh) Phan

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RESEARCH INTERESTS

Databases and Artificial Intelligence, with an emphasis on enhancing data discovery in data catalogs with large language models.

EDUCATION

Ph.D. Computer Science, **University of Wisconsin-Madison** (expected) 2029
Advisor: Professor AnHai Doan

B.S. Computer Science, **University of Illinois Urbana-Champaign** 2024

RESEARCH EXPERIENCE

Research Assistant, University of Wisconsin-Madison 2024-present
Advisor: Professor AnHai Doan.
Ongoing research in building smarter data catalogs. Collaborated with a domain science team to identify opportunities for applying AI technology to their catalog. Conducted a literature review of open-source data catalogs and analyzed relevant datasets.

Research Assistant, University of Illinois Urbana-Champaign 2023
Advisor: Dr. Jim Basney.
Conducted a study of the cryptographic keycache functionality in the open-source SciToken Python library. Improved the library to correctly handle negative caches and ensure thread safety. Developed command-line tools to simplify interactions with SciToken and benchmarked performance under concurrent requests.

Research Assistant, University of Illinois Urbana-Champaign 2022-2023
Advisor: Dr. Kenton McHenry.
Built a command-line tool that helps NCSA data scientists easily scale and deploy their machine learning models on the cloud.

INDUSTRY EXPERIENCE

Software Engineer Intern, Amazon Summer 2023
Designed a workflow to integrate video content into Customer Service by Amazon landing page. Developed frontend with ReactJS to display video player and seller anecdotes carousel. Deployed these updates to production across multiple regions.

Software Engineer Intern, Amazon Summer 2022
Built a native AWS service for data completeness reporting and automated triaging of failed workflows using Lambda, DynamoDB, S3, and CloudWatch. The service was in production by end of internship, saving 100 on-call workdays annually.

Software Engineer Intern, Synchrony   2021-2022
Developed multiple data scrapers to extract data from internal services and PDF/PowerPoint invoices and generate insightful reports, saving customers over 90 hours of manual effort annually.

TEACHING EXPERIENCE

Teaching Assistant, University of Wisconsin-Madison   2024-present
CS 564, Database Management Systems, 207 students. Built auto-grader for SQL assignment, helped students in office hours, assisted in preparing for and grading assignments and exams along with 3 other TAs.

Course Assistant, University of Illinois Urbana-Champaign   2021-2022
CS 222 and CS 242, Programming Studio. Conducted weekly code review sessions for 12 students, supervised final projects and provided feedback on design patterns and coding practices.

TECHNICAL SKILLS

- Programming Languages: Java, Python, SQL, C++, Javascript.
- Technologies: AWS, ReactJS, Git, Docker, Apache Kafka, Pandas, Scikit-learn.
- Spoken Languages: English, Vietnamese.

RELEVANT COURSEWORK

- Systems: Topics in Databases, Database Systems, System Programming, Distributed Systems.
- Artificial Intelligence: Machine Learning, Applied Machine Learning.

EXTRACURRICULARS

Vice President External, UIUC Lambda Phi Epsilon   Spring 2024
Organized social events in collaboration with student organizations and coordinated successful fundraisers. Led monthly philanthropy events with the national partner NMDP to raise awareness and recruit potential donors for leukemia patients.

Coordinator, UIUC ACM Mentorship Program   2021
Coordinated online events to introduce incoming students to UIUC Computer Science programs, engaging 100+ participants and facilitating mentor-mentee matching.

Event Manager, AngelHack Vietnam   2019-2020
Led online and in-person hackathons with 500+ participants, for example HackCovy, and managed a startup incubation program following the events.