Khanh Tra (Fay) Nguyen Tran

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EDUCATION

St.Olaf College Northfield, MN

Bachelor of Arts in Computer Science and Math, Concentration in Statistics and Data Science

Expected May 2026

- GPA: 3.99/4.0
- Relevant Coursework: Data Structures, Software Design, Hardware Design, Analysis of Algorithms, Programming Languages, Theory of Computation, Algorithm for Decision Making, Linear Algebra, Discrete Math, Abstract Algebra, Probability Theory, Modern Computational Math, Multivariable Calculus

Trinity College Dublin

Dublin, Ireland

Exchange Student at School of Computer Science and Statistics

Hilary Term 2025

- Grade: First Class Honours
- Relevant Coursework: Advanced Computer Networks (Cryptography), Compiler Design, Information Management II (Database System Management), Concurrent Systems and Operating Systems, Artificial Intelligence I

SKILLS

Languages: C++, C#, Python, R, Kotlin, HTML/CSS, TypeScript, Bash, SQL, JavaScript, Go, Haskell, Prolog Frameworks & Software: Android Studio, Visual Studio Code, Visual Studio, Git, Tableau, .NET, ASP.NET, Microsoft SQL Server, Postman, JSON, p5.js, Gradle, MongoDB, React.js, Node.js, Express.js, Vite, Bootstrap, Docker, Splunk

EXPERIENCE

Software Engineering Intern | Salesforce (Indianapolis, IN)

June 2025 - August 2025

- Engineered an end-to-end API endpoint in the C# and .NET middle tier that delivers a real-time recommendation feature to improve stack-level performance across 1000+ databases
- Designed a new metric table with T-SQL stored procedures to autonomously log 3000+ entries per day, deprecate old data points, and run statistical aggregations in less than 200 ms to serve the recommendation algorithm
- Integrated the API into UI using JavaScript, with Jasmine and Mocha unit tests and implemented localization for a global-friendly user experience
- Built feature flags, configurable settings, and telemetry to monitor performance, wrote 30+ unit/integration tests, and ensured successful QA validation and delivery through CI/CD pipeline
- Actively participated in Agile development (daily stand-ups, backlog grooming, retrospectives) to ensure seamless delivery and continuous improvement

Undergraduate Researcher | St. Olaf College (Northfield, MN)

May 2023 – May 2024

- Developed the **Multi Agent Development App** to distribute goals equally and efficiently to the autonomous agents by implementing the **Resource-Conscious Algorithm** in *Python* to select the goal exhibiting resource costs closest to those achieved in the most optimized results attained through the baseline algorithms in 80% of test instances, with approximately 60% of the available agents got assigned
- Publication: Nguyen Tran, K. T., Young, J., & Kondrakunta, S. (2024). Initial Goal Allocation for Multi-agent Systems. The International FLAIRS Conference Proceedings, 37(1).

Computer Science Lead Teaching Assistant | St. Olaf College (Northfield, MN) Feb 2023 - Present

- Provided evaluation and feedback for students' assignments and exams as well as facilitating 2 help sessions per week to support 60+ students and answer questions about data structures, C++, Version Control, and algorithms
- Conducted training sessions at the beginning of each semester for 20+ Computer Science Teaching Assistants, providing comprehensive guidance on grading policies, and effective communication strategies with students

Projects

SECURE CLOUD STORAGE | JavaScript, C#, .NET, ASP.NET Core, MySQL

March - April 2025

- Developed a secure cloud storage system supporting user authentication, group management, and role-based access control to uploaded files
- Implemented hybrid (AES-256 and RSA) encryption mechanism, with certificate-based key distribution and dynamic access for users and groups and designed metadata handling and secure file storage with protections against unauthorized access and seamless key rotation for new members

KITCHEN STORY | Kotlin, Android Studio, XML, SQLite

April 2024

- Extracted data from Spoonacular API in *JSON* format, integrated information of recipes onto the RecyclerView to provide a dynamic and engaging user interface experience that shows recipes based on the inputted ingredients
- Developed database storing data for offline usage with SQLite and Room