

AKAR KAUNG (He/Him/His)

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EDUCATION

M.Sc. in Computer Science, 2023

University of Minnesota, Twin Cities, MN

GPA: 3.78/4.00

Relevant Coursework: Intelligent Robotic Systems, Parallel Animation & Planning in Games, Computer Organization, Advanced Algorithms and Data Structures, Software Engineering II

B.Sc. in Computer Science, 2021

University of Minnesota, Twin Cities, MN

GPA: 3.59/4.00

Relevant Coursework: Machine Architecture and Organization, Introduction to Operating Systems, Development of Secure Software Systems, Software Engineer I, Computer Networks

AS. in Computer Science, 2019

Green River College, Auburn, WA

GPA: 3.40/4.00

RESEARCH EXPERIENCES

University of Minnesota - Twin Cities

May 2022 – May 2023

Research Assistant (*Prof. Mattia Fazzini's Lab*)

- Collaborated with PhD students to develop tools to streamline data preprocessing and analysis workflows for Natural Language Processing (NLP) models research, enhancing overall efficiency.
- Contributed to an automated project creation system to facilitate course-related assignments and improve reproducibility for Prof. Fazzini's course.
- Conducted bug pattern analysis to predict future software defects, applying data analysis techniques to enhance software quality assurance processes.

Independent Research Projects

- Analysis of Cloth Simulation in Parallel Programming**

Jan 2023 – May 2023

Prof. Pen-Chung Yew

Researched and implemented parallel programming techniques to optimize the computational efficiency of cloth simulations. Evaluated different approaches to improve performance and achieve smoother real-time rendering of complex physical interactions.

- Optimized and Efficient Path-Finding Algorithms**

Sept 2022 – Dec 2022

Professor Nikolaos Papanikolopoulos

Conducted comparative analysis of pathfinding algorithms in simulated restaurant environments to identify optimal strategies for robotics navigation, aiding decision-making for operational improvements and customer experience enhancement.

- Rehabilitation for Elderly Using Virtual Reality**

Sept 2022 – Dec 2022

Professor Victoria Interrante

Developed an immersive virtual reality environment for the elderly to simulate familiar life experiences, enhancing engagement and supporting rehabilitation progress through memory stimulation and interactive movement.

TEACHING EXPERIENCES

University of Minnesota - Twin Cities

Jan 2022 – May 2023

Graduate Instructor

- Taught core software engineering topics, including Agile methodologies, Git version control, unit testing, and design patterns in C++, to junior and senior undergraduate students.
- Led individual and group troubleshooting sessions to address diverse software issues and bugs, fostering student confidence and technical proficiency.

- Created instructional materials and lab content for over 1,000 students, emphasizing practical application of theoretical concepts.
- Supervised 30+ teaching assistants over multiple semesters, coordinating grading, managing course logistics, and responding to student inquiries.

University of Minnesota - Twin Cities

Teaching Assistant (Prof. Mattia Fazzini)

Sept 2021 – Jan 2022

- Worked closely with Professor Mattia Fazzini to analyze and refine lab and assignment instructions, contributing to the enhancement of the learning experience
- Led lab discussion sessions for a class of 105 undergraduate students, facilitating their progress and ensuring the successful completion of assignments and projects.
- Conducted thorough evaluations of student performance through project assessments, offering constructive feedback to promote continuous improvement and a deeper understanding of course concepts.

WORK EXPERIENCES

Edirq Inc.

Jan 2025 – Present

Co-Founder & Software Engineer

- Co-designed a new social media platform centered on meaningful user connections rather than engagement farming, focusing on content relevance and trust.
- Developed the core feed and interaction logic by analyzing user behavior patterns and designing custom ranking algorithms to surface contextually relevant content.
- Explored and iterated on recommendation strategies (e.g., user similarity, content embeddings, interaction graphs) to balance personalization with content diversity.
- Built the backend architecture (AWS, Node.js, PostgreSQL) to support scalable data collection and real-time algorithm feedback loops for continuous improvement.
- Created the technical foundation for future research-driven features, including adaptive recommendation models, social graph analysis, and user intent prediction.

Meta - Contractor

Mar 2025 – May 2025

Software QA Tester

- Validated performance, usability, and stability of Meta's AR/VR products by executing 500+ hands-on test cases across Oculus Quest 2, 3, 3S, Meta Ray-Bans, and unreleased prototypes, primarily targeting AI-driven features.
- Identified and documented 50+ high-impact bugs in software, AI behavior, and system performance through functional, exploratory, and usability testing, accelerating issue resolution and improving product quality.

Outlier AI

Jan 2024 – Dec 2024

AI Prompt Engineer

- Designed and engineered prompt solutions to improve system performance and reliability, yielding an 80% approval rate for outputs flagged as high-quality responses.
- Analyzed prompt behavior and failure cases by reviewing peer submissions, identifying systemic weaknesses, and applying targeted refinements to improve reliability and robustness.

Green River College

May 2018 – Jun 2019

International Student Ambassador

- Collaborated with cross-functional teams, including student organizations, administrative staff, and faculty members, to ensure comprehensive event planning and seamless coordination of logistics and resources.
- Acted as a liaison between international students and college administration, advocating for student needs and promoting inclusive campus initiatives to enhance the overall student experience.
- Provided guidance and support to international students, facilitating their integration into campus life and promoting cross-cultural understanding and friendship among the student body.

HONORS, AWARDS, AND ACHIEVEMENTS

1. **Dean's List of Scholars, College of Science and Engineering, University of Minnesota, January 2020 – May 2021.** Awarded to students whose grade point average is 3.66 or above and who completed 12 hours of graded coursework per semester.

2. **Campus Life Leadership Award, Campus Life, Green River College, June 2019.** Recognized for outstanding leadership and contributions as an International Student Ambassador, fostering community engagement and supporting fellow students.
3. **Honorable Mention for Best Decoration Event, The Current, Green River College, June 2019.** Recognized for creating a vibrant and culturally authentic atmosphere, featuring traditional lanterns, calligraphy, and symbolic decorations that captured the essence of the Lunar New Year celebration.
4. **Student Representative of Math Division Tenure Committee, Green River College, January 2019 - June 2019.** Served as one of the few selected student representatives on the Math Division Tenure Committee, contributing to faculty tenure evaluations and decision-making.
5. **Student Representative of IT Budget Committee, Green River College, May 2018 - June 2019.** Served as the sole student representative on the IT Budget Committee, providing input on technology funding decisions and advocating for student needs in IT resource allocation.
6. **Awarded to participate in the Council of Unions and Student Programs - Student Leadership Conference, Green River College, May 2018.** Awarded the opportunity as a selected student from Green River College to participate in the Council of Unions and Student Programs - Student Leadership Conference, representing the college in leadership development and advocacy discussions.
7. **Certificate of Recognition for Thesis Defense, American Mathematical Association of Two-Year Colleges, Green River College, June 2018.** Recognized for successfully presenting a thesis defense in the 2018 AMATYC Student Research League, an exclusive competition for selected participants chosen by the Green River College Mathematics Division.
8. **Recognition of Outstanding Achievement in Mathematics, Green River College, June 2018.** Awarded MAA membership by the Green River Mathematics Division for exceptional academic performance and excellence in mathematics.
9. **Best Design Award ChatBot Hackathon, Myanmar, November 2016.** Awarded best design prize for developing a chatbot with optimized UI/UX and multilingual support, enhancing user engagement and efficiency.

PROJECTS

Space-Warfare ([URL](#))

Tech Stack: UE5, C++, Blender

- Created a smart spaceship simulation in UE5, predicting and engaging enemy spaceships while implementing evasion tactics.
- Designed a self-destruct feature for the spaceship, triggered when health drops below a threshold.
- Integrated advanced evasion tactics into the spaceship's AI algorithms, enabling it to successfully dodge and outmaneuver enemy spaceships when detected and targeted.

Back2Town ([URL](#))

Tech Stack: Unity, C#, Blender

- Developed a 3D character simulation within Unity, incorporating advanced NPC movement using the Dijkstra pathfinding algorithm.
- Designed and implemented a sophisticated collision avoidance system to enhance gameplay realism and character interactions within the virtual environment.
- Utilized Unity's tools to bring detailed, realistic environments to life, improving both visual appeal and functionality.

Autonomous Drone Transportation Simulation ([URL](#))

Tech Stack: C++, HTML, CSS, JavaScript, UML, Agile

- Developed a simulation for autonomous passenger drones, including algorithmic control of drone flight and passenger transport functionality.
- Produced detailed UML diagrams and comprehensive documentation, supporting code optimization and system architecture clarity.
- Refined existing codebase using Factory, Decorator, and Strategy design patterns to improve code organization and structure.

Core NLP XML To Brat Ann Conversion ([URL](#))

Tech Stack: Python, XML, ANN

- Developed a Python script to convert Core NLP XML files to Brat Ann format, handling Part-of-Speech (POS) tagging and dependency relations based on Enhanced++ Dependencies.
- Implemented functions for parsing XML structures, extracting token information, and generating annotation and configuration files, ensuring compatibility with Brat visualization tools.
- Utilized XML parsing techniques in Python's ElementTree library to automate the conversion process, improving efficiency and reducing manual annotation work.