Chan Um

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EDUCATION

Purdue University West Lafayette, IN
B.S. in Computer Science concentrating on Machine Intelligence, Minor in Mathematics Aug 2020 - May 2026 (Expected)
Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Programming in C

EXPERIENCE

Johns Hopkins University - Ahn Lab Baltimore, MD
Summer Research Intern May 2025 – Present

- Joining a Johns Hopkins University Biomedical Engineering lab for Summer 2025, focusing on computational research methodologies and applications

Kiahara Lab West Lafayette, IN
Undergraduate Researcher Mar 2025 – Present

- Developed and deployed a web server application for protein prediction functions using Python (FastAPI) for backend development and JavaScript (React.js) for frontend interactions
- Collaborated with graduate students to translate biological research needs into user-friendly software solutions

Purdue RecWell West Lafayette, IN
RecWell Gaming Lab Specialist Jun 2024 – Present

- Managed IT hardware/software maintenance for a gaming lab serving 100+ daily users; decreased system downtime by 40% through proactive monitoring and efficient troubleshooting

Purdue University Korean Association West Lafayette, IN
Webmaster Team Quality Assurance Jan 2024 – Dec 2024

- Conducted pre-deployment testing of web features, documented detailed test cases, and streamlined QA processes, significantly reducing production bugs and accelerating developer response times.
- Improved user experience (UX) by identifying, documenting, and addressing critical usability issues.

Republic of Korea Army Daejeon, South Korea
Motor Transport Operator Aug 2021 – Feb 2023

- Completed 18 months of military service, coordinating logistical operations for a team of 50+ personnel; enhanced leadership, teamwork, and strategic planning skills.

PROJECTS

Optimal Pathfinding System (C++, Dijsktra's & Floyd-Warshall Algorithms) Apr 2025

- Developed a pathfinding application in C++ to identify the fastest and most cost-effective route between jump gates and systems, ensuring optimal performance under specified constraints
- Implemented Dijkstra's algorithm to compute the shortest travel time and integrated the Floyd-Warshall algorithm to determine minimal distance paths between every pair of gates

Social Media Platform, Project Leader (Java) May 2024

- Led a team of four in designing, developing, and deploying a responsive social media application under strict feature and timeline constraints
- Implemented core functionalities including user authentication, profile management, personalized news feed algorithms, and interactive messaging and commenting systems

INVOLVEMENT & AWARDS

Honors & Awards: Dean's List (GPA 3.5+): Fall 2023 – Present
Involvement: Purdue Astronomy Club (Member), Purdue Korean Association (Social Media Manager)

TECHNICAL SKILLS

Programming Languages: Advanced in Java, Python, R — Comfortable with C/C++
Frameworks: FastAPI, TensorFlow
Tools and Technologies: Git/Github, IntelliJ, VS Code, RStudio, Blender, Jupyter Notebook