

# Jonathan Kim

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## EDUCATION

**University of Wisconsin-Madison**, School of Letters and Science

May 2027

- **Bachelor of Science**, Majors in Computer Science and Data Science | GPA: 3.87/4.00
- Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Artificial Intelligence, Data Science Modeling, Linear Algebra, Discrete Math, Computer Engineering, Machine Organization and Programming, Advanced Statistics

## EXPERIENCE

**Software Engineer Intern** — Direct Supply, Milwaukee, Wisconsin

May 2024 – Aug 2024, May 2025 – Aug 2025

- Engineered and deployed end-to-end workflows for a web platform that increased user operational efficiency by 200%.
- Built client-facing features using React and RTK Query, enabling seamless access to new functionality and real-time data.
- Developed mobile features in Kotlin and Swift for Android and iOS, driving a 15% boost in engagement across over 50,000 users.
- Optimized SQL stored procedures, improving efficiency by 50% and building resilience.

**Full Stack Engineer** — Szczykutowicz Lab, University of Wisconsin-Madison

Oct 2023 – Present

- Designed and implemented AWS architecture for lab environments, managing cloud-hosted databases and data storage solutions.
- Constructed databases using MySQL by implementing 5,000+ configurations for CT scanning protocols.
- Created GUI in MATLAB for optimizing scanning protocols, enabling user views and edits.
- Developed optimization workflows, reducing scan times and radiation doses by 50%.

**Computer Programming Tutor** — Code Ninjas, Madison, WI

Apr 2021 – Apr 2023

- Educated 100+ students ages 5-14 about JavaScript, Python, and Lua.
- Pioneered summer camp curriculum for applying coding concepts to mod popular games and develop problem solving skills.

## RESEARCH

- Szczykutowicz, T. P., Kim, J., Krebs, J., Meier, J., Ponziak, M., Lubner, M. G., Toia, G. V., & Ranallo, F. (2025). A multidecade study of CT protocol optimization with a focus on automatic exposure control. Manuscript submitted for publication to the Journal of the American College of Radiology (JACR).

## PROJECTS

**Carpool Optimizer**

Feb 2025 - Mar 2025

- Developed an algorithm to optimize carpool routes, leading to a 30% decrease in total driving distance for assigned drivers.
- Improved time efficiency by 70% and reduced fuel consumption by 25% by minimizing unnecessary detours and mileage.
- Developed an automated workflow using Python, enabling UW Club Tennis to efficiently schedule rides for 100+ members daily.

**Chess Assistant Analyzer Bot**

Jun 2023 – Jul 2023

- Developed bot to analyze 100,000+ user-inputted chess games and openings.
- Designed GUI that supports features such as adjustable depth of analysis and detailed animations of opening moves.
- Formulated statistical algorithm, targeting weaknesses and strengths, resulting in 20% increase in personal play rating.

**Team Game Development**

Sep 2022 – Jun 2023

- Worked as lead project manager and programmer in team of three on 2D Unity puzzle game.
- Streamlined workflow using GitHub, Agile, and Scrum to benchmark and delegate developer tasks.
- Presented at engineering fair to 100+ professionals and peers.

## TECHNICAL SKILLS

**Languages:** Python, Java, C#, C, TypeScript, JavaScript, Kotlin, Swift, SQL, HTML, CSS, MATLAB, R

**Frameworks/Libraries:** React, SwiftUI, .NET, Unity, JUnit, RTK Query, Redux, FastAPI, Rest APIs

**Tools & Technologies:** Redux, AWS (RDS, EC2, S3), GCP, MySQL, Git, Docker, Linux, Windows, JIRA, Pandas, New Relic, CI/CD

## AWARDS

**Wisconsin-Dairyland Programming Competition** – 1st of 71 teams (2023).

**CodePath** – Intermediate Technical Interview Prep, Advanced Certificate (2025).

**UW-Madison Club Tennis** — National Championship 11th Place (2025), Colorado Classic 3rd Place (2024).

**Future Business Leaders of America Nationals** — Computer Applications 5th Place (2023), Business Management 4th Place (2022).

**State of Wisconsin Higher Educational Aids Board** — Academic Excellence Scholarship Winner (2023).