

Meghna Swaminathan

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WORK EXPERIENCE

William Blair

June 2024 – Aug. 2024

Software Engineering Intern | Strategic Resource Group (SRG)

Chicago, IL

- Created a dashboard by integrating **ServiceNow** data into William Blair's CDM using **Azure** data pipelines for the company's internal usage.
- Developed software enhancements on **Azure** using **SQL** and **JavaScript**, improving workflow efficiency.
- Managed **Azure DevOps** deployments with **Python**-based data transformation & **Synapse** pipeline creation.
- Provided technical support and troubleshooting for internal users, resolving system issues to maintain operations.

Software Engineering Intern | IT Service Management (ITSM)

Chicago, IL

- Implemented a custom **form** to streamline data collection and user interaction for **local admin rights**.
- Developed custom **JavaScript** event listeners to automatically populate hidden features based on value changes, enhancing data integrity and user experience.
- Collaborated with **ITSM** & **Security** teams to meet firm requirements & ensure a smooth deployment process.

Advance Auto Parts

Jan. 2024 – Apr. 2024

Software Engineering Intern

Raleigh, NC

- Extracted business rules from **AS400** code using **Gen AI**, focusing on system processes and documentation.
- Assisted in migrating **AS400** code to **Java**, implementing secure coding practices to reduce system redundancy.
- Managed technology-related projects, ensuring timely delivery and alignment with **business objectives**.

Signet Jewelers

Jun. 2023 – Aug. 2023

Software Engineering Intern

Akron, OH

- Developed and optimized user-centered interfaces with **React.js**, focusing on enhancing user experience and ensuring secure data handling.
- Collaborated with cross-functional teams to ensure secure **front-end & back-end** systems integration.
- Conducted troubleshooting and interacted with third-party vendors to resolve issues, ensuring minimal downtime.

RESEARCH & PROJECTS

Institute of Sustainable Future - DUIRI

May 2024 – Dec. 2024

Research Assistant to Dr. Torsten O Reimer, Ph.D & Dr. Juan Pablo, Ph.D - Purdue University

- Engaging in a project on Public Charging Station Infrastructure, developing experimental protocols and materials.
- Developed **50 maps** with random cities, routes, and charging stations to simulate **real-world scenarios**.
- Utilized **AI** to create dependency maps, **optimizing charging station placement** for maximum efficiency.

Shell Implementation

Aug. 2024 – Dec. 2024

- Developing a shell interpreter in **C** with command parsing features using **Lex/Yacc** to support **pipes, I/O redirection** and background execution.
- Implementing process management using **fork()**, **execvp()**, **waitpid()**, and signal handling to manage child processes.
- Gaining experience in **UNIX systems** and efficient resource management.

Assembly x86-64 Compiler

Aug. 2023 – Dec. 2023

- Crafted a **compiler** for a C-like language, showing expertise in **compiler architecture** and syntax analysis.
- Optimized **assembly code generation**, enhancing the compiler's **operational efficiency** and output quality.
- Implemented **dynamic memory management** and optimized data structures, improving the compiler's **memory efficiency** and runtime performance.

EDUCATION

Purdue University

West Lafayette, IN

Bachelor of Science in Computer Science

May 2025

TECHNICAL SKILLS

Languages: Java, JavaScript, Python, C, C++, SQL, HTML, CSS, RStudio

Frameworks & Tools: React.js, Node.js, Puppeteer.js, Microsoft Azure, Django, PyTorch, MS Office, PowerBI, Linux, Git, ServiceNow