Raghav Kaashyap

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Education

Iowa State University Ames, IA

Bachelor of Science in Software Engineering, Minor in Artificial Intelligence *Expected Graduation: May 2027*

- **GPA: 3.93 | Dean's List (All Semesters), Top 2% Engineering**
- **Relevant Coursework**: Object Oriented Programming, Data Structures, Algorithms, UI/UX, Software Development, Software Architecture, Embedded Systems, Testing, OS (Fall 2025), DBMS (Fall 2025)

Experience

Student Software Engineer August 2025 – Present

John Deere *Ames, IA*

- Developing **backend automation tools in Python** to improve **AWS cloud** security posture and reduce manual effort across environments
- Building and maintaining **scalable backend services** on AWS to enhance infrastructure **reliability, compliance, and performance**

Software Engineer Intern May 2025 – August 2025

Principal Financial Group *Des Moines, IA*

- Automated the enterprise **guest access provisioning system** using **JavaScript** and **RESTful APIs**, reducing manual effort by **98%** and cutting approval latency by **91%** across 900+ annual requests
- Migrated a legacy **C#** data integration service to **Python**, streamlining **SQL Server to DB2** pipelines and reducing SQL calls by **60%** while improving **maintainability** and **backend efficiency**
- Built a **full-stack** solution with **Next.js**, **TypeScript**, and **AWS EC2** that integrated **AI-powered** spending insights into a customer-facing budgeting tool

Undergraduate Research Assistant - AI/ML & Data Science August 2025 – Present

D4 NRT, Iowa State University *Ames, IA*

- Selected for an NSF-funded program researching machine learning **fairness**, **interpretability**, and reliable deployment
- Researching **machine unlearning** and **predictive uncertainty** in **deep learning**, identifying vulnerabilities introduced by malicious unlearning requests
- Developing and evaluating models with **PyTorch** in **Jupyter Notebooks**, targeting reliable deployment of AI in high-stakes domains such as **healthcare** and **autonomous driving**

Projects

Utilities Spend Tracker | *React, Java, Spring Boot, MySQL*

- Built a full-stack utility tracking platform to automate expense analysis by integrating **Apache Tika** with a **Java Spring Boot** backend for **PDF parsing**, achieving accuracy in extracting structured billing data
- Designed and implemented **RESTful APIs** and dynamic, **real-time visualizations** (bar and line charts) to present trends across 4 utility categories and enhance user insight

NutriNavigator | *Android Studio, Java, Spring Boot, MySQL*

- Developed a meal planning app with core **backend features** (calorie computation, meal logic), **JWT-based authentication**, and **scalable APIs** to support user features
- Set up **CI/CD with GitLab Runner** and automated backend tests using Rest Assured, reaching **100% coverage**

Bomb Detection Robot | *C, Python*

- Programmed an autonomous robot in **C** with sensor integration, motor control, and navigation logic to identify hazardous objects and simulate field responses
- Implemented **real-time sensor polling** and decision-making algorithms for dynamic obstacle avoidance and threat localization

Technical Skills

Languages: Java, Python, C, SQL, JavaScript, TypeScript, HTML/CSS
Developer Tools: Git/GitHub/Gitlab, Postman, VS Code, Maven, Figma, Jira, AWS, Docker
Libraries/Frameworks: Spring Boot, React, React Native (with Expo), Node.js, Express.js
Database Technologies: MySQL, SQLite, MongoDB