

EDUCATION

Iowa State University

Bachelor of Science in Computer Science, Minor in Applied AI

Expected Graduation: **May 2026**

Ames, IA

EXPERIENCE

Undergraduate AI/ML Researcher

08/2024 - 01/2025

Software Analytics and Pervasive Parallelism Lab (SwAPP)

Ames, IA

- Developed custom tools using the Tree-sitter parsing library, NumPy, and APIs in Python, resulting in the creation of auto-labeled datasets for model analysis and interpretability, streamlining the labeling process by 60%
- Designed and optimized a data processing pipeline utilizing NumPy and SciPy to preprocess and transform datasets of over 100,000 data points, achieving a 40% reduction in processing time and improving clustering model accuracy
- Conducted prompt engineering and error analysis using Git for version control, refining model outputs to reduce bias and enhance clarity, precision, and consistency across generated content

Software Engineer Intern

05/2024 - 08/2024

The DePaul DICE Lab

Chicago, IL

- Designed and launched a Docker container interface on Ubuntu VM, integrating Content-Defined Merkle Trees (CDMT) with Python to minimize redundancy and improve operational efficiency by 35%
- Engineered a data processing pipeline using Python and NumPy to clean and transform container workflow logs, reducing redundancy by 30% and improving log analytics for anomaly detection and resource optimization
- Automated container workflows with Python scripts, streamlining deployment, resource management, and GitHub error logging—cutting setup time by 50% and reducing user-related errors by 40%

PROJECTS

convertfile.me | JavaScript, HTML, CSS, Node.js, Express, Multer, Sharp, PDF-Lib

02/2025

- Developed a web-based file conversion tool with a JavaScript, HTML, and CSS frontend for file uploads and management
- Built a Node.js + Express backend to handle file processing, using Multer for multi-file uploads and temporary storage, Sharp for converting images between formats (PNG, JPG, and more), and PDF-Lib for merging and manipulating PDFs
- Implemented a drag-and-drop interface with real-time file selection tracking for improved usability

CyLife | Full-stack Application, JavaScript, Java, MySQL, Spring Boot, Android Studio, WebSockets, Maven, CI/CD

12/2024

- Spearheaded backend development for a full-stack application, utilizing Spring Boot, Java and MySQL to optimize multiple relational database tables, resulting in a 30% increase in application performance
- Collaborated in a 4-person team to integrate real-time chat and notification features into the application using WebSocket channels, ensuring smooth and cohesive functionality alongside frontend developers
- Configured Maven (pom.xml) for efficient dependency management, streamlining the development process and improving coordination between backend and frontend teams

Cherzy Crypto Bot | Python, Telegram & Cryptocurrency APIs, AWS EC2/S3, Automation Scripts

06/2024

- Developed a Python-based Telegram bot leveraging the CoinGecko API to deliver real-time cryptocurrency data, price tracking, and actionable trading insights to 100+ users with 99.8% uptime and 45% less downtime
- Designed bot functionality to analyze cryptocurrency market trends across three time intervals (1 hour, 1 day, 7 days), providing vital metrics such as market cap, 24h volume, and circulating supply for informed decision-making

LEADERSHIP

Project Lead - Computer Science & Software Engineering Club (CSE) @ Iowa State University

01/2024 – 12/2024

Treasurer - Chess Club @ Iowa State University

01/2024 – 05/2024

Optimization Lead - PrISUm Solar Car @ Iowa State University

08/2022 - 09/2023

SKILLS

Languages: Java, Python, SQL/MySQL, C/C++, JavaScript, HTML/CSS

Frameworks/Tools: React.js, Node.js, Express, Docker, Git/GitHub, AWS EC2/S3, Spring Boot, Neo4j

Technologies: Machine Learning, Distributed Systems, Data Visualization, Natural Language Processing, RESTful API, CI/CD