

EDUCATION

Iowa State University <i>Bachelor of Science in Computer Science, Minor in Applied AI</i> Relevant Coursework: Advanced Data Structures, Software Development Practices, Object-Oriented Programming, Design Algorithms, Computer Architecture, Discrete Mathematics, Probability & Statistics	Expected Graduation: May 2026 Ames, IA
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TECHNICAL SKILLS

Languages: Java, Python, C++, C, MySQL, TypeScript, JavaScript, HTML/CSS Frameworks/Tools: React.js, Flask, Node.js, Angular, Next.js, Tailwind CSS, PyTorch, Docker, Git, AWS EC2/S3/VPC/IAM Technologies: Large Software Systems, Natural Language Processing, Distributed & Parallel Systems, Machine Learning, Unix/Linux Environments, Translation of Data, Backend Development, Information Retrieval, Databases Certifications: Docker Mastery: Kubernetes & GitHub Actions CI (Udemy, 06/2024), The Git & Github Bootcamp (Udemy, 06/2024)

EXPERIENCE

Undergraduate AI/ML Research Assistant <i>Software Analytics and Pervasive Parallelism Lab (SwAPP)</i> <ul style="list-style-type: none">Developed tools using the Tree-sitter parsing library to generate auto-labeled datasets, facilitating the labeling of model-learned concepts for deeper model analysis and interpretability.Designed and implemented a data processing pipeline with SciPy, handling over 100,000 data points to perform statistical analysis and clustering, significantly improving model interpretability and computational performance.Conducted prompt engineering and performed error analysis to refine model outputs, focusing on reducing bias and improving clarity, precision, and consistency across generated content.	08/2024 - Current Ames, IA
Software Engineering Research Intern <i>The DePaul DICE Lab</i> <ul style="list-style-type: none">Boosted operational efficiency by 35% by designing and launching a Docker container interface, integrating Content-Defined Merkle Trees (CDMT) to reduce redundancy and streamline container management by 30%.Optimized Docker performance and data storage using CDMT and SciUnits to track container dependencies, resulting in a 30% increase in efficiency and a 20% reduction in storage costs across multiple environments.Automated container workflows with Python scripts to handle deployment, resource management, and error logging, cutting setup time by 50% and reducing user-related errors by 40%.	05/2024 - 08/2024 Chicago, IL

PROJECTS

CyLife <i>Full-stack App, MySQL, Spring Boot, Android Studio, WebSockets</i> <ul style="list-style-type: none">Led backend development for a full-stack app with Spring Boot and MySQL, managing 4 relational tables and utilizing Maven (pom.xml) for dependency management.Developed real-time chat and notification features with two WebSocket channels for instant messaging and alerts, collaborating with a frontend developer to deploy the Android client via Android Studio.Built a scalable backend with Spring Boot, MySQL database, and integrated an Android client via Android Studio.	10/2024
Cherzy Coin Bot <i>Python, Telegram & Cryptocurrency APIs, AWS EC2, PuTTY, Unix/Linux, Automation Scripts</i> <ul style="list-style-type: none">Provided users with instant market updates by developing a Python bot that connects to Telegram’s API to fetch real-time cryptocurrency prices, improving response time and accuracy of market data delivery.Reduced downtime by 45% and maintained 99.8% uptime by streamlining bot deployment on AWS EC2 in Unix/Linux environments using PuTTY for secure SSH connections, allowing for efficient remote management.	06/2024
Archived Message Reconstruction <i>Java, Recursive Algorithms, Performance Optimization Tools</i> <ul style="list-style-type: none">Improved message decoding accuracy and reliability to 99.9%, while boosting processing speed by 30% through the use of recursive algorithms for efficient tree construction, enhancing both system performance and operational efficiency.	12/2023

LEADERSHIP

Computer Science & Software Engineering Club (CSE) - Project Lead <ul style="list-style-type: none">Led diverse coding projects by fostering collaboration, guiding members through complex problem-solving, and organizing technical workshops to enhance coding practices, teamwork, and expertise in emerging technologies.	01/2024 – Current
PrISUm Solar Car - Optimization Lead <ul style="list-style-type: none">Enhanced solar-powered vehicle performance by 35% by perfecting an onboard diagnostic system for real-time data collection and analysis, improving the accuracy of performance monitoring and system optimization.	08/2022 - 09/2023