

Asray Gopa

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EDUCATION

Iowa State University - Ames, IA

Bachelor of Arts and Science - Major in Computer Science, Minors in Economics & Entrepreneurship

Anticipated: May 2026

3.73/4.0 GPA

RELEVANT EXPERIENCE

Principal Financial Group

May 2025 - Present

Software Engineering Intern

Des Moines, IA

- Developed full-stack features using React and Spring Boot, contributing to both frontend interfaces and backend APIs.
- Participated in the full software development lifecycle, including design, coding, testing, deployment, and documentation.
- Worked on chaos engineering efforts to simulate system failures and improve platform resilience.
- Assisted in building data recovery and disaster recovery solutions to ensure business continuity.

National Science Foundation - Moothedath Research Lab

January 2025 - Present

Research Intern

Ames, IA

- Developed decentralized multi-task learning models in Python using NumPy, focusing on scalability and modularity.
- Implemented spectral clustering and graph-based algorithms to optimize task grouping and subspace separation.
- Conducted distributed training simulations on AWS EC2 and evaluated performance using Frobenius error and subspace distance metrics.

National Science Foundation - ARA Wireless Labs

May 2024 - December 2024

Research Intern

Ames, IA

- Created advanced deep learning models to analyze authentic and synthesized TV white space and LoRA data
- Developed a LoRAMesh sensor hub for farmers, using machine learning and computer vision to analyze plant health and detect pests
- Designed 5+ computational algorithms to enhance wireless communication systems, collaborating with a multidisciplinary team
- Automated download tasks with scripts, cutting effort by 50%, and deployed data collection hardware, reducing setup time by 30%

SKILLS

Languages: Java, Python, JavaScript, C, C++, Rust, SQL, Assembly

Frameworks/Libraries: React, RoboFlow, TensorFlow, Expo, JDBC, Maven, MathplotLab, NumPy, PANDAS, BeautifulSoup

DevTools: Git, AWS, Kubernetes, Google Cloud, Terraform, Linux/Unix, Visio, Jira, GitHub, VS Code, Docker, Terminal, Vercel, Heroku, Firebase, Supabase, Android Studio, PostgreSQL, IntelliJ, WebStorm, Fleet, Eclipse, Neo4j, MySQL Workbench, Figma, UltiMaker, Illustrator

HONORS & AWARDS

Ivy Hackathon 2024 - First Place

Iowa State University Innovation Prize 2023 - First Place

BuildDSM Hackathon 2024 - Second Place & Best Pitch

Iowa State University Computer Science Coding Contest 2024 - First Place

Clayton Farms Hackathon 2022 - First Place

Iowa State University Ag Innovation and Value Creation Competition 2024 - First Place

Okoboji Entrepreneurship Institute Cohort 18 - 1 of 33 Iowa's Top Student Entrepreneurs selected

ENTREPRENEURIAL EXPERIENCE

The Brik

August 2023 - Present

Founder + Operator

Ames, IA

- Orchestrated the development of The Brik, a compact organizational tool, from concept to fruition, with 5 figures in annual sales
- Oversaw market research, prototype development with 3D printing and laser cutting, and manufacturer partnerships to bring to market
- Implemented effective marketing strategies, including social media campaigns, to build brand awareness and gather customer feedback

LEADERSHIP EXPERIENCE

Iowa State University Student Government

September 2022 - Present

Student Senator, Legislative Ambassador, Off-Campus President, Computer Science Student Advisory Board, and CyRide Board of Trustees

- Championed student-focused policies, securing funding for key initiatives like a campus resource hub and free tutoring credits.
- Led state-level advocacy efforts, lobbying for mental health legislation, contributing to the passage of state-approved bills.
- Appointed as one of six Trustees overseeing a \$50 million public transit budget, optimizing service accessibility for students.

PROJECTS

Neighborhood Finance Corporation (NFC) - <https://nfc.how> - hackDSM Charity Hackathon Project

- Built a cost-effective mapping system for a non-profit organization using GitHub Actions and Leaflet, reducing maintenance expenses
- Automated map updates for non-technical users to update maps without coding experience, saving NFC over \$100,000 annually
- Authored comprehensive documentation to ensure long-term project sustainability and ease of maintenance.

CyDine - COMS 3090: App Development Class - Best App Award, Best Coder Award, Best Manager Award

- Developed an AI-powered nutrition app using web scraping, OpenAI API, and Nutritionix to improve student health.
- Engineered a real-time recommendation system to combat unhealthy eating habits and the "Freshman 15" with personalized meal plans
- Designed an intuitive UI to make healthy eating accessible, promoting better nutrition through tech-driven solutions

VerifyAI - Ivy Hackathon 2024 1st Place Winner

- Developed an AI-powered plugin using Python, TensorFlow, and real-time signal processing to detect deepfake phone scams
- Engineered a deepfake detection system leveraging ML models to analyze audio patterns and identify AI-generated voices
- Built a seamless, user-friendly solution with React and Flask, helping safeguard families from social engineering attacks

PATENT

Provisional Application

USPTO EFS ID: 43536320 - Folding Instrument Comprising Of Multiple Miniaturized Geometrical Drawing Tools