

Armaan Gupta

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Washington, DC

EXPERIENCE

• John Deere Intelligent Solutions Group

Johnston, IA / Remote

Software Engineer, Agricultural Data Management

June 2025 – Present

- Manage data challenges for 10+ petabytes of agricultural telemetry from 1m+ connected tractors across 30+ countries, observing farmers' privacy concerns about autonomous equipment and data ownership
- Upgraded infrastructure by migrating critical services to AWS SDK v2, reducing security vulnerabilities and improving system maintainability
- Implemented new features for core APIs to enhance the types of measurements that farmers can access in John Deere Operations Center online

• DocuVet

Ames, IA

Founder & AI Ethics Lead

October 2023 – July 2025

- Developed responsible AI framework for veterinary medical documentation, implementing mandatory human review protocols and transparent AI attribution to address liability concerns raised by 30+ veterinary stakeholders
- Established bias monitoring system to prevent species-based discrimination in AI outputs, specifically addressing under-representation of equine medical terminology in SOAP note outputs
- Navigated complex intersection of AI transparency, medical record consent laws, and veterinary liability through extensive stakeholder engagement across 5 clinics
- Built user feedback mechanisms achieving 94% accuracy validation while maintaining clear human-AI accountability boundaries

• John Deere Financial

Johnston, IA

Software Engineer, Financial Data Compliance

June 2024 – June 2025

- Led security remediation efforts addressing financial regulatory requirements and global security concerns for customer data protection, eliminating 253 vulnerabilities including 47 critical issues
- Ensured compliance with global financial data regulations while managing 10M+ customer records migration, balancing security requirements with operational needs
- Communicated complex technical security concepts to non-technical management and co-workers, bridging gap between engineering implementation, policy compliance, and organizational goals

• Kreative Horizon

Ames, IA

Lead Organizer, Emerging Technology Education

August 2022 – May 2024

- Launched Iowa's first agricultural "data-thon" connecting 50 students with real-world data governance challenges in farming, emphasizing responsible data use and analysis
- Scaled HackISU invention competition to 147 participants focusing on agricultural technology applications, facilitating dialogue on AI implementation in rural communities, Iowa's second largest hackathon
- Created platform for 450+ students to explore emerging technology implications, with 90% reporting enhanced understanding of real-world technology impact

• John Deere Financial

Ames, IA

Student Software Engineer, Security Access Systems

November 2022 – May 2024

- Developed security access control interface implementing role-based permissions and audit trails, ensuring compliance with financial regulatory requirements
- Evaluated 5 technology frameworks against 23 criteria including security, maintainability, and compliance capabilities, producing assessment that shaped organizational technology investments
- Developed React-based security access control interface used by manager, automating 4-hour manual process and saving \$70,183 annually

• Cookie-Less Advertising Innovation Fellowship

Ames, IA

Policy Research Lead

October 2021 – May 2022

- Researched global privacy regulations including GDPR implications for advertising technology, developing framework for privacy-preserving first-party data advertising
- Advised CEO Tony Sardella (Evolve24, Smithsonian Laureate) on balancing innovation with privacy compliance in post-cookie advertising ecosystem
- Presented privacy-compliant technical alternatives to behavioral tracking to industry panel, winning 2nd place among competing teams

EDUCATION

- **Iowa State University** Ames, IA
B.S. in Management Information Systems; Minor in Marketing *Aug 2020 – May 2024*
 - Relevant Coursework: Information Systems Security, IT Management, Database Management, Business Law, Philosophy, Ethics

PUBLIC SERVICE & GOVERNANCE EXPERIENCE

- **Board Member, dsmHack (2024-Present)**: Lead nonprofit connecting 100+ developers with local nonprofits to solve community challenges through technology annually
- **Member, Ames Public Arts Commission (2023-2024)**: Mayoral appointed at-large board member contributing to municipal and arts initiatives and funding
- **Founder, Americans United (2022)**: Ames-based 501(c)4 aiming to pass bi-partisan municipal legislation for zoning and city planning through petitions, fundraising, and city council engagement
- **Treasurer, Tau Kappa Epsilon (2021-2022)**: Managed \$100,000 annual budget, implementing financial controls and transparency measures for 110+ member organization

POLICY-RELEVANT TECHNICAL EXPERTISE

- **AI Governance**: Bias monitoring, human-in-the-loop systems, transparency requirements, accountability frameworks
- **Data Privacy**: GDPR compliance, consent management, agricultural data sovereignty, financial regulations
- **Stakeholder Engagement**: Technical-to-management translation, multi-stakeholder interviews
- **Implementation**: Python, Java, Scala, Typescript, real-time distributed systems, security remediation, large-scale data governance

RECOGNITION & ACHIEVEMENTS

- **Techstars Startup Weekend Mentor (March 2025)**: Guide emerging entrepreneurs on responsible technology development and community impact
- **Featured in Innovation Iowa Magazine (July 2024)**: Profiled for expanding access to hands-on technology education and its societal impact through hackathon organizing in the Midwest
- **1st Place, Founders Live Minneapolis (2023)**: Pitched DocuVet's responsible AI approach to veterinary documentation, emphasizing transparency and human oversight
- **CyStarters Accelerator, Cohort 7 (Summer 2022)**: Selected for competitive entrepreneurship program building and launching startups with ethical technology considerations
- **Iowa State Innovation Fellow (2021-2022)**: Completed selective program focused on translating technological innovation into societal impact through practical solutions
- **Selected Delegate, World Fair Dubai (2021)**: Chosen to represent Iowa State's innovation ecosystem at international technology showcase, engaging with global tech perspectives
- **Eagle Scout, Boy Scouts of America (2018)**: Led community infrastructure project demonstrating long-term commitment to public service