

# Nick Colleran - Software Engineer | Machine Learning and Autonomy

[Nickc1245@gmail.com](mailto:Nickc1245@gmail.com) | <https://www.linkedin.com/in/nick-colleran/> | <https://www.nickcolleran.com/>

## **Summary:**

Software Engineer with expertise in Machine Learning, Vision Processing, and Project Management. Dedicated to crafting elegant software solutions for complex problems by combining technical excellence with creativity. Skilled in ensuring software correctness, reliability, and alignment with business objectives. Thrives in fast-paced environments, quickly mastering new technologies, collaborating across teams, and delivering high-quality software solutions efficiently.

## **Education:**

**Masters of Science in Computer Science (In Progress)**, Georgia Institute of Technology - Atlanta GA

*Specialization:* Interactive Intelligence

**Bachelor of Science in Software Engineering**, University of Nebraska Lincoln - Lincoln NE

*Specialization:* Machine Learning & Artificial Intelligence

## **Experience:**

**Software Engineer 1, Autonomy and Machine Learning** at *ALA Engineering*, Lincoln, NE, 06/2024 - Present

- Developing, testing, and deploying a fully autonomous cabinless cattle feeding solution that will allow redistribution of skilled labor within feedlots.
- Designing and implementing vision processing, data correction, and autonomous decision-making algorithms using C++ for inference, perception, and autonomous decision making, Python (PyTorch, Ultralytics, TensorFlow) for model development, and ROS2 for robotics interaction.
- Fusing data from lidar sensors, radars, cameras, and more to create and maintain a dynamic occupancy grid that accurately represents the vehicle's surroundings.

**Junior Software Engineer** at *Drone Amplified*, Lincoln, NE, 05/2023 - 06/2024

- Spearheaded the development of a serverless web application for customer troubleshooting, data collection, and drone fleet management. Used NodeJS and React along with AWS services such as IAM, Cognito, and more to develop and deploy this full-stack application.
- Created a Python inventory tool suite that saved the company ~\$1,000 per week in labor costs.
- Developed Python and Bash scripts on the fly as needed.

**Software Engineering Intern** at *Sandhills Global*, Lincoln, NE, 01/2022 - 01/2023

- Developed and tested full-stack dotnet(.net) applications with SQL databases.
- Worked in a SCRUM environment alongside a team of experienced engineers to maintain and update pre-existing software and release new projects.
- Contributed to agile practices such as sprint planning, retrospectives, standups, and more.

## **Certificates:**

**Google Project Management Professional Certificate**, Coursera

**Overview:** Completed 6 courses developed by Google that include hands-on, practice-based assessments and are designed to prepare students for introductory-level roles in Project Management and Business.

## **Technical Skills:**

Skilled in software engineering, AI/ML development, product management, aligning development initiatives with business objectives and user needs, and ensuring software correctness and reliability. Expert in agile environments. Proven track record of efficient project execution and high-quality software solutions.

- Scripting and Development: **C++, Python, Javascript, C, C#, Visual Basic, Java, HTML/CSS**
- Database and Source Control: **SQL, DynamoDB, MongoDB, GraphQL, Git, DevOps, Bitbucket, Azure**
- Machine learning: **Ultralytics, TensorFlow, NumPy, Keras, PyTorch, ONNX**
- AWS Services: **Cognito, S3, Lambda, Cloud Watch, IAM, Cloud Formation, Serverless**
- Agile Development: **Jira, Zenhub, Slack, Teams, Figma, Draw.io, UML**