

# Cameron Fabbri

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## SUMMARY

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Senior Machine Learning Engineer with 8 years of experience across diverse domains, adept at rapidly solving complex problems through innovative, cutting-edge solutions.

## SKILLS

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**Technical Skills:** Python, Pytorch, Transformers, Tensorflow, OpenAI, sklearn, NumPy, Pandas, SQL, Git

**Machine Learning:** Neural Networks, Computer Vision, Large Language Models, Retrieval Augmented Generation

**Soft Skills:** Problem Solving, Critical Thinking, Communication, Leadership, Teamwork

## EXPERIENCE

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### Prolego, Inc.

03/2022 - 05/2024

*Senior Data Scientist*

Remote

- Developed a system to generate synthetic financial data for training table detection models ensuring data privacy while improving model robustness.
- Built a Retrieval Augmented Generation (RAG)-based system to automate the alignment of internal policy documents with external regulatory standards for compliance processes.
- Advanced compliance matching using open source LLMs, automatically developing if-then conditions for each policy to predict and aid in future rule compliance.

### 3M

09/2018 - 03/2022

*Data Scientist Specialist*

Maplewood, MN

- Initiated and led a dedicated team focused on developing applications of generative models, driving innovation across multiple projects.
- Designed machine learning-driven computer vision tools to generate SEM-like images from Confocal Microscope data using GANs, enhancing image quality and structural detail.
- Conducted predictive and generative experiments on point clouds and 3D meshes of abrasive grains for identifying patterns in breakage behavior under stress and wear.
- Developed advanced generative models for automated metamaterial design, streamlining the optimization of physical simulations to enhance design efficiency.

### Air Force Research Laboratory

07/2015 - 08/2018

*Computer Scientist*

Rome, NY

- Developed a custom CNN to extract radio frequency signal strength from satellite imagery.

## EDUCATION

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### M.S Computer Science

2018

*University of Minnesota*

Minneapolis, MN

Thesis: Underwater Image Enhancement using Generative Adversarial Networks

### B.S Computer Science

2015

*Clarkson University*

Potsdam, NY

## PATENTS

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### Neural network-based generation and placement of tooth restoration dental appliances

Patent Number US11960795B2, Granted April 16 2024

### Automated processing of dental scans using geometric deep learning

Patent Number US-20240008955-A1, Published January 11 2024 (pending)

### Deep Learning for Automated Smile Design

International Publication Number WO2023017390A1, Published February 16 2023 (pending)

### Systems, media, and methods for metasurface development

International Publication Number WO2024127190A1, Published June 06 2024 (pending)

## PUBLICATIONS

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### Enhancing Underwater Imagery using Generative Adversarial Networks

