

Jakeb Milburn

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EDUCATION

University of Delaware

May 2025

M.S. - Computer Science

Relevant Coursework: Computer Vision, Machine Learning, Large-Scale Machine Learning, Natural Language Processing, Artificial Intelligence, Data Mining, AI for Bioengineering and Bioinformatics, Computer Systems: Architecture, Algorithm Design and Analysis, Parallel Computing, Mobile Robot Programming, Automata Theory, Cybersecurity, Human-Computer Interaction

University of Delaware

May 2025

Artificial Intelligence Certificate

University of Delaware

December 2024

B.S. - Computer Science, Concentration: Artificial Intelligence and Robotics

TECHNICAL SKILLS

Machine Learning and AI Techniques: Large Language Models, Fine-tuning & deploying LLMs (OpenAI, LLaMA, Hugging Face), Generative AI (Diffusion Models, Retrieval-Augmented Generation (RAG), Embeddings), Natural Language Processing (Named Entity Recognition, Sentiment Analysis, OCR), Computer Vision (Object Detection, Image Processing, Segmentation)

Languages: Python, Javascript, Java, C#, C, Swift, HTML, CSS

Deployment & Infrastructure: AWS (SageMaker, Bedrock, Lambda, S3), Azure ML, Google Cloud Platform

Frameworks & Libraries: PyTorch, Tensorflow, Keras, Scikit-learn, Hugging Face Transformers, NumPy, Pandas, OpenCV

EXPERIENCE

IncNow: Agents and Corporations

Wilmington, DE

Software Engineer

May 2022 - September 2024 (Summers)

- Designed, fine-tuned, and deployed LLMs for a production-ready AI-powered customer service chatbot across web and Slack.
- Built RAG pipelines with vector store integration and optimized embeddings for contextual retrieval and factual response generation.
- Conducted prompt engineering and error analysis to iteratively improve chatbot accuracy and fluency.
- Maintained training logs and evaluation metrics to support continuous deployment in AWS Lambda and SageMaker.
- Integrated intelligent document handling and form parsing through OCR and NLP pipelines.

University of Delaware DeepREAL Lab - AI/ML Researcher

February 2024 - May 2024

- Led research on scalable multi-class classification of marine terrain using CNNs, U-Net with ResNet backbones.
- Processed large sonar and bathymetric datasets, engineered preprocessing pipelines, and trained models with IoU/Dice evaluation.
- Contributed to reproducible ML workflows with modular code and documented hyperparameter tuning strategies.

ZipCode Wilmington - Augmented Reality Engineer Intern

May 2023 - July 2023 (Summer)

- Developed a real-time AR learning app using WebAR and JavaScript for 3D rendering and object tracking.
- Applied computer vision to enhance marker-based interactions and improved app latency and responsiveness.

University of Delaware Men's Crew Team - Student-Athlete

September 2020 - May 2025