

JONATHAN ZUL LUNA

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Software developer and MSc Computer Science student with experience building AI-enabled applications, backend workflows, and production-oriented software tools. Founder/CTO experience leading technical strategy, rapid prototyping, and applied AI product development. Strong background in Python, TypeScript, FastAPI, Angular, SQL, cloud AI tooling, and human-in-the-loop systems.

EDUCATION

University of Prince Edward Island (UPEI) MSc in Computer Science	Charlottetown, PEI May 2026 - Apr 2028
University of Prince Edward Island (UPEI) BSc Major in Computer Science (Honours), Minor in Business Administration <i>Dean's Honours List</i> (2022-2023, 2023-2024, 2024-2025, 2025-2026)	Charlottetown, PEI Sep 2022 - May 2026 <i>GPA: 3.9/4.3</i>

EXPERIENCE

Somru BioScience Inc. <i>Research Intern (Mitacs Accelerate)</i> - Contributing to platform development for internal analytics tools, building features across Angular (frontend) and FastAPI (backend). - Developing machine learning methodology for biomanufacturing analytics, supporting biosimilarity and comparability research for monoclonal antibody production. - Collaborating with a cross-functional team spanning software engineering and applied ML research, as part of a Mitacs Accelerate MSc research placement.	Charlottetown, PEI May 2026 - Present
AquaPathAI <i>Co-Founder & Chief Technology Officer</i> - Leading technical strategy and product development for an AI-enabled diagnostic software platform supporting pathology workflows for aquaculture disease detection. - Architecting a human-in-the-loop system for large-image analysis, integrating computer vision models, diagnostic logic, and interactive reporting features into a practical software workflow. - Driving rapid prototyping and AI-assisted development across backend logic, data pipelines, and product design using modern coding tools and LLM-enabled workflows.	Charlottetown, PEI Jan 2026 - Present
University of Prince Edward Island <i>Undergraduate Research Assistant Oyster MSX Project</i> - Engineered a modular AI pipeline for analysis of gigapixel whole-slide images, combining deep learning, computer vision, and rule-based reasoning to support expert diagnosis. - Built software workflows for large-scale image processing, model inference, and result generation on HPC infrastructure using Python, CUDA, and parallelized compute resources.	Charlottetown, PEI Summer 2024 - Present

PROJECTS

MSX-Sentinel: Anatomically-Aware Diagnostic Framework Architected a three-tier AI pipeline (YOLO detection, SAM segmentation, and a Vision-Language Model) to automate pathogen detection in 130GB whole-slide aquaculture pathology images, producing an explainable diagnostic grade validated against expert pathologist standards. Basis of Honours thesis research.
DeckAssembler Built an asynchronous slide-merging platform using a FastAPI backend with a Dramatiq/Redis worker-queue architecture to handle CPU-intensive PDF/PPT rasterization at scale, deployed and in production use.

SELECTED AWARDS & INVITED PRESENTATIONS

Science Atlantic MSCS Conference <i>1st Place Best Undergraduate Presentation & Science Communication Award</i>	Oct 2025
Startup Pitch Competitions & Accelerators <i>UNB RBC Student Pitch, UPEI Panther Pitch, Ocean Startup Project Idea Challenge – \$18,500 total non-dilutive funding</i>	Mar - Apr 2026

TECHNICAL SKILLS

- **Languages:** Python, TypeScript, JavaScript, Java, C++, SQL, R
- **Frameworks & Tools:** FastAPI, Angular, LangChain, Git, GitHub, Azure AI, Pandas, NumPy
- **AI & Data:** PyTorch, Scikit-learn, TensorFlow, OpenCV, YOLO, SAM, LLM/VLM integration
- **Systems:** APIs, database design, backend workflows, HPC (Alliance Canada), CUDA