# Amitav Krishna

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GitHub — Website
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## Summary


- ML-focused software engineer with experience in research-driven experimentation, low-level learning system implementations, and early-stage startup engineering
- Currently working on hiring-evaluation infrastructure at an early-stage startup; previously built and operated small production systems with real users


## Research

- **Frobenius Normalization Enables Stable Training for Quantum State Denoising** 2025 – Present
  *Manuscript* — *GitHub*
  - Designed and evaluated CNN, MLP, and Transformer autoencoders for denoising simulated quantum states
  - Identified Frobenius-norm normalization as a key factor in training stability and convergence
  - Ran controlled experiments comparing architectures, losses, and normalization schemes

## Experience

- **Software Engineering Intern** November 2025 – Present
  *8090 Solutions*
  - Working on hiring-evaluation infrastructure to distinguish strong vs weak engineering candidates
  - Contributing to system design, evaluation logic, and internal tooling under real product constraints
  - Iterating with feedback from senior engineers in a fast-moving startup environment

## Projects

- **Neural Network Training from First Principles (C++)** 2025
  *GitHub*
  - Implemented forward and backward passes, loss computation, and optimization logic without ML frameworks
  - Used synthetic data to validate correctness of backpropagation and training dynamics
- **Stock Market Email Notifications (Production Side Project)** 2024
  *GitHub*
  - Built and deployed a Python-based email service delivering daily stock-related updates
  - Operated a live system with dozens of active users and daily delivery
  - Deployed and maintained the application on Linux servers, handling scheduling, uptime, and failures

## Education

- **Holy Trinity Catholic High School** Graduating 2028
  *Ontario Secondary School Diploma (OSSD)* *Simcoe, ON*