

ARYAN BISWAS

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EDUCATION

Queen's University

Bachelor of Computing (Honours), Specialization in Software Design

Kingston, ON | September 2021 – April 2026

GPA: 3.8/4.0

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C/C++, C#, SQL, Bash

AI/ML: PyTorch, TensorFlow, Hugging Face, Scikit-learn, XGBoost, OpenCV, Pandas, NumPy

LLM Systems: MCP, LangChain, AutoGen, RAG, Vector Search

Backend/Infrastructure: FastAPI, Node.js, Next.js, React, Angular, PostgreSQL, Docker, AWS, GitHub Actions, Linux

EXPERIENCE

QMind

AI Research Project Lead, DeepFakeGuard

Kingston, ON | May 2025 – April 2026

- **Led a 5-person team** to build DeepFakeGuard, an open-source multimodal deepfake detection toolkit (Python, PyTorch, Streamlit); first-authored a **CUCAI 2026 proceedings paper** selected for a spotlight presentation.
- **Fine-tuned a DINOv3 Vision Transformer** with parameter-efficient LayerNorm and final-block tuning, achieving **0.880 AUROC** on Celeb-DF v2 and exceeding Xception-c23 by **0.227 AUROC** (cross-dataset, trained on FaceForensics++).
- **Engineered a multimodal fusion system** combining DINOv3 visual, LipFD audio-visual, and D3 temporal detectors with trust-weighted scoring and domain-specific applicability gating.
- **Built a VLM-powered forensic reasoning module** with interchangeable GPT-4o Mini, Claude, and Qwen2-VL backends, generating explanations from sampled frames, ensemble scores, and detector diagnostics.

BMO

AI Engineer, via TCS Pace Port

Toronto, ON | October 2024 – August 2025

- **Converted a TCS internship POC into a production GenAI design-to-code platform** using an MCP server integrated with GitHub Copilot, generating Angular components, pages, and UI interactions from Figma designs for **100+ internal users**.
- **Automated ALM test-case drafting** with LLM agents and tool-augmented workflows, reducing manual QA effort by **40%** across enterprise testing pipelines.
- **Built an LLM-powered TypeScript refactoring system** automating safe migration of legacy AngularJS codebases to Angular across active production sites.

TCS Pace Port

AI Research Intern

Toronto, ON | May 2024 – October 2024

- **Designed an XGBoost churn-risk model** for BMO business-banking customers, producing segments for targeted retention.
- **Delivered an OCR and machine-translation pipeline** for RBC that processed **1,000+ enterprise documents** in production while preserving source-document formatting.
- **Built a resume-screening system** using vector embeddings and cosine-similarity retrieval, cutting screening time by **75%**.

Queen's University

Undergraduate Teaching Assistant

Kingston, ON | September 2022 – April 2023

- **Mentored 100+ students** in CISC 101 and CISC 121; built an autograder that reduced instructor grading time by **36%**.

PROJECTS

ACE-Step 1.5 | Open Source Contributor | github.com/ace-step/ACE-Step-1.5

- **Contributed to ACE-Step 1.5**, a **10.4k-star** open-source AI music-generation model with an arXiv paper and integrations across the AMD and ComfyUI ecosystems.
- **Fixed a cross-platform Gradio upload bug** in ACE-Step's audio-generation pipeline by patching temporary-file path handling, adding **4 regression tests**, and contributing merged upstream fixes through **PR #1148**.

Beacon AI Meeting Intelligence | KingHacks 2026

Kingston, ON

- **Built a real-time AI meeting assistant** using a Manifest V3 Chrome extension that streamed live Google Meet captions into a low-latency RAG pipeline for contextual Q&A.
- **Engineered a streaming RAG architecture** using FastAPI, Next.js, Server-Sent Events, and Backboard.io for grounded summarization, live decision tracking, and action-item generation.

Agentic RAG Chatbot for Business Banking | BMO Hackwave

Toronto, ON

- **Placed Top 10 of 40+ teams** by building a GPT-4 multi-agent banking assistant with LangChain and AutoGen for loan qualification, scheduling, account retrieval, and policy support.