Joyjit Choudhury

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EDUCATION

University of Victoria — Victoria, BC
Master of Science (Thesis) in Computer Science, Supervisor: Dr. Alex Thomo, GPA: 9/9 — *Sept 2024 - Aug 2026**
- **Coursework**: Data Mining & Machine Learning, Data Models & Algorithms

Concordia University — Montreal, QC
Master of Applied Computer Science (Transferred to UVic) — *Jan 2024 - Aug 2024*
- **Coursework**: Algorithm Design, Deep Learning, Advanced Programming

National Institute of Technology Durgapur — Durgapur, India
B.Tech. in Computer Science & Engineering, GPA: 8.74/10 (First Class Distinction) — *2014 - 2018*

EXPERIENCE

University of Victoria — Victoria, BC
Graduate Teaching Assistant | CSC 429/529 - Cryptography (with Dr. Bruce Kapron) — *Jan 2025 - Apr 2025*
- Graded problem sets/exams for the CS senior/graduate level course on cryptography

Turvo (acquired by Lineage, Inc.) — Hyderabad, India
Senior Software Engineer (SDE 3) | Distributed Systems, Java, Python, MongoDB, MySQL, ElasticSearch, RabbitMQ, Redis, AWS — *Aug 2019 – Dec 2023*
- Promoted twice (SDE1→SDE2→SDE3) based on performance and team/org impact; awarded MVP (R3/R4 2022) across org
- Built and operated distributed, event-driven backend systems for Turvo's collaborative logistics platform and Transportation Management System
- Worked with PMs, tech leads, and enterprise customers to turn PRDs into shippable designs; authored architecture notes and test plans
- Delivered the **Order–Shipment Synchronisation** feature end-to-end: API/data model design, messaging flows, validation, deployment, and rollout.
- Modernized the internal maps platform: migrated to newer HERE Maps APIs with dynamic versioning; integrated OpenRouteService and Nominatim, reducing map API spend by US$750K/year.
- Built a high-performance Redis lookup cache and optimized ElasticSearch/DB queries to improve read performance across services
- Resolved multiple **P0** prod incidents on-call by tracing logs across services/queues/datastores in Kibana; authored runbooks to prevent recurrences.
- Interviewed 50+ candidates and mentored 5+ new hires; onboarded engineers to service ownership, on-call, and debugging practices.

Oracle — Hyderabad, India
Applications Engineer | Java, REST APIs, JAX-RS, EJB, JPA, SQL, JavaScript, Oracle JET, HTML, CSS — *Jul 2018 – Aug 2019*
- Full-stack development of the Budget Control module of Oracle Mercury - internal cloud supply chain planning tool

Complex Networks Research Group (CNeRG), IIT Kharagpur — Kharagpur, India
Research Intern | Multivariate point processes, C++, GCC — *Summer 2017*
- Developed a C++ package for Fitting Parameters of a Sparse Multidimensional Hawkes Process, for modeling user interactions in Twitter

PROJECTS AND OPEN SOURCE

Neural Debates | Graduate Research | *Python, LLM APIs: OpenAI, Anthropic, etc* — 2025 (Ongoing)
- Developed a Python-based framework to simulate debates between ideologically-driven LLM agents using generated personas
- Systematically evaluated debate dynamics to analyze inherent model biases toward consensus and currently experimenting with different techniques to encourage more assertive and ideologically consistent arguments

HTTP Server | Project | *Python, TCP Sockets* — Summer 2025
- Built a concurrent HTTP/1.1 server from scratch in Python using raw TCP sockets, featuring support for persistent connections, Gzip compression, and GET/POST request handling. Source Code

Few-Shot Image Classification (CIFAR-10) | Deep Learning Course Project | *PyTorch, CNN, RNN, ResNet-18, Transfer Learning* — April 2024
- Designed a staged fine-tuning approach on **ResNet-18**, improving top-1 accuracy by **9 pts** over baseline across **50 randomized seeds**.
- Built a **transfer-learning** pipeline (ImageNet → STL-10 → CIFAR-10 last-layer), delivering **5 pt** gains vs. baseline over **50 seeds**.
- Ran systematic ablations (optimizer, lr/decay, layer freezing) with **multi-seed, variance-reduced evaluation**, and shipped a reproducible training/evaluation harness. Source Code

GNOME Calendar | Open Source Contribution | *C, GTK+, Linux, GNOME* — Summer 2017
- Authored and merged multiple patches fixing obscure bugs in the week-view functionality of GNOME Calendar

TECHNICAL SKILLS

Programming: Java, C++, Python, C, SQL, JavaScript, HTML, CSS
Frameworks & Libraries: Spring, Spring Boot, Spring Data JPA, Hibernate (Java); PyTorch, pandas, NumPy (Python)
Database Tech & Tools: MySQL, MongoDB, ElasticSearch, Redis, RabbitMQ
Testing, CI/CD & Others: JUnit, Mockito, Jenkins, Liquibase, Log4j, Kibana, Git, Docker, AWS, Linux

ACHIEVEMENTS AND POSITIONS

- **Vice President - UVic CS Graduate Student Association,** Organize events and manage funds for the UVic CSCGSA
- **Most Valuable Player,** Awarded MVP for R3/R4 2022 performance at Turvo Inc.
- **Rank 1 in Senior Secondary School,** Army Public School Kolkata (Science stream)