# Arnav Jain

Waterloo, ON | LinkedIn | Github | arnavjain.dev | a245jain@uwaterloo.ca

## EDUCATION

**University of Waterloo**                                                                                                              **Waterloo, ON**
*Bachelor of Computer Science*                                                                          *Graduation Date: April 2025*

- *Core courses*: Object-Oriented Software Development, Data structures and Data Management, Operating Systems, Algorithms, User Interfaces, Relational Database Management, Software and Systems security, Software architecture
- *Awards*: President's Scholarship of Distinction, International Excellence Scholarship
- *Volunteering*: Pink Tie for Math Orientation '22, Head Pink Tie for Math Orientation '23

## WORK EXPERIENCE

**Tata Consultancy Services**                                                                                                              **Toronto, ON**
*Software Developer Intern*                                                                                *May 2024 – August 2024*

- Engineered a robust computer vision application for food volume estimation leveraging depth maps, segmentation, 3D point clouds and GPT-4 Vision, achieving an accuracy rate of **~70%.**
- Architected and implemented a comprehensive full-stack application using **React.js**, **Next.js** and **Node.js**, facilitating operations for **~1,000** internal employees.
- Led the enhancement of **CI/CD** pipeline architecture in **Jenkins**, significantly optimizing developer productivity and deployment efficiency.

**Ontario Lottery and Gaming**                                                                                                              **Toronto, ON**
*Technology Security Analyst Intern*                                                                        *Sept 2023 – Dec 2023*

- Designed and implemented an application, complete with an interactive dashboard, to streamline the logging and analysis of **Threat Risk Assessments**
- Developed custom Python scripts for **Tenable Nessus Agent** to systematically detect and report the presence of Rapid7 agents on **1200**+ workstations, **optimizing** security assessment processes
- Architected and deployed a **Disaster Recovery Tracking System** using Power Automate and Power Apps, enhancing the efficiency by **~25%** of managing disaster recovery records of various services and products.
- Lead the migration of team workflows from **Microsoft Planner** to **Jira**, collaborating with team leads to optimize task allocation and progress-monitoring processes.

**The Globe and Mail**                                                                                                              **Toronto, ON**
*Software Engineer Intern*                                                                                  *Jan 2023 – April 2023*

- Automated the **import** of **500**+ manually created IAM resources into **Terraform** state by developing **bash scripts**, enhancing efficiency and accuracy
- Led a successful company-wide upgrade of **AWS EKS cluster** and **Karpenter** resulting in **~ 40%** cost savings by optimizing **EC2 instance types** according to the compute load
- Delivered a comprehensive **CI/CD** architecture on **BuildKite** that effectively increased automation and **reduced** operational **Kubernetes** costs
- Conducted rigorous proof-of-concept testing to validate the feasibility and potential impact of various features and integrations within the platform

**Loblaw Companies Limited**                                                                                                              **Toronto, ON**
*Software Engineer Intern*                                                                                *May 2022 – August 2022*

- Spearheaded the successful migration of **100**+ retail stores to **Google Cloud Platform** by developing and implementing custom frameworks and **CI/CD pipelines** at scale
- Created an interactive dashboard that extracted real-time data from the GCP console using a **node.js** backend and served it to a **react.js** frontend, enabling efficient monitoring of the status of **virtual machine (VM) instances** running in the cloud.
- Streamlined the store migration process by designing **Terraform** templates that automated the creation of custom Virtual Private Clouds (**VPCs**), Managed Instance Groups (**MIGs**), and Internal Load Balancers (**ILBs**)

## PROJECTS

**Beacon** | *Kotlin, TypeScript, NestJs, MongoDB, Geocode API*

- Built an **android** app that connects people looking for help with basic tasks with those within physical proximity.
- Frontend was built using **Kotlin**, backend was developed in **TypeScript** using **NestJs** framework and a **MongoDB** database

**SPshORTS** | *Node.js, React, Python, Flask, Huggingface*

- A sports news app which **webscrapes** sports articles from various news sites and **summarizes** them into a 60-word article
- Built a **text-summarizer model** using **facebook/bart-large-cnn** model; Application was developed in **Node.js** and **React**

**CreateCI/CD** | *Python, TypeScript, Go, PyTorch, SciPy, Huggingface*

- Fine-tuned **CodeLlama** to generate YAML files for **CI/CD**, optimizing the **Github Action** setup for JavaScript applications
- Developed a **CLI tool** written in **Go** to make HTTPS requests to a **NestJs** backend and create the YAML file

## TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, Go, Kotlin, Java, SQL, NoSQL
- **Frameworks:** Node,js, React, Angular, NestJS, Next.js, PyTorch, scikit-learn, Huggingface
- **Tools:** Docker, Helm, Kubernetes, Terraform, MongoDB, Git, Microsoft Power Apps, Firebase
- **Certifications:** AZ-900, AI-900