# AYUSH JAIN

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## EDUCATION

**New York University - Courant Institute of Mathematical Sciences, New York, NY**          **Sep 2021 - May 2023**

Masters of Science in Computer Science, GPA: 3.5/4.0

*Coursework: Fundamental Algorithms, Database Systems, Machine Learning, Computer Vision*

**RV College of Engineering, Bangalore, IN**          **Aug 2015 - May 2019**

Bachelor of Engineering in Electronics and Telecom, minor in Computer Science, GPA (Minor): 3.7/4.0

*Coursework: Intro to Programming, Data Structures, Operating Systems, Image Processing*

## SKILLS

**Programming/Scripting Languages:** C++/C [Intermediate], Python [Intermediate], SQL [Intermediate], HTML/CSS [Beginner], JavaScript [Beginner], JAVA [Beginner], Spark [Beginner]

**Databases:** Relational-DBMS (MySQL), NoSQL (MongoDB)

**Tools/Platform:** Jenkins, Docker, Kubernetes, Google Cloud Platform/Storage, Linux/Unix, Git, Vim, VS Code, Agile

**Libraries and Framework:** BigQuery, PySpark, Hive, scikit-learn, PyTorch, TensorFlow, OpenCV, Numpy, Pandas

## EXPERIENCE

**Software Engineer Intern - Walmart Global Tech, Bentonville, US**          **May 2022 - Aug 2022**

- Designed an architecture to implement California Privacy Rights Act by analysing the existing dataflow diagrams to empower 120M Walmart users by improving user data transparency using **PySpark** on **Hive** & GCS databases
- Improved Spark jobs run-time by 30% by clustering on **Google Cloud Storage** databases using **BigQuery**

**Software Development Engineer - Amadeus Software Labs, Bangalore, IN**          **Jul 2019 - May 2021**

- Developed **backend** infrastructure in **C++** for Air Canada enabling redemption of points for 10M+ travellers
- Spearheaded complex development and deployment of CPP11 to CPP14 migration of Ticketing backend in **Agile**
- Delivered 20+ bespoke developments by updating Baggage, cabin, security and regulatory policies for 5+ airlines
- Handled **CI/CD** pipeline and critical maintenance tasks, patching 100+ incident records for 20+ airlines
- Awarded with **High flyer award** in Q4 of 2019 for showcasing best delivery, innovation, and ownership in team

**Software Development Intern - Amadeus Software Labs, Bangalore, IN**          **Jan 2019 - May 2019**

- Implemented a full-stack **C++ backend app** to form a consolidated document for flight, hotel, and car booking
- Reduced backend transactions by **~40%** for smoother traveler experience by merging all itineraries in one doc

## PROJECTS

**Maintaining Accuracy of GNN with Increasing Depth -** GNN | Python | PyTorch - Git Repo

- Implemented mitigation strategies to control accuracy drop in **Graphical Neural Nets** on Cora and PubMed data

**Text to Image Synthesis using DCGAN -** Deep Learning | Python | PyTorch - Git Repo

- Synthesised photo-realistic images from the textual data using Deep Convolutional **Generative Adversarial Net**

**Cheapest Airfare Booking Date Predictor -** Python | Regression | Jupyter

- Created cheapest fare booking date predictor on **8.82M itineraries** with ~88% accuracy using **Random Forest**

**Detection of weapons in public places -** Deep Learning | Tensorflow | OpenCV

- Trained model on a custom dataset created by labelling 1200+ images of 5 different guns
- Achieved ~81% mean accuracy by implementing **Faster RCNN Inception** to early detect and stop terrorist attacks

## RESEARCH AND PUBLICATIONS

G Chandan, **Ayush Jain**, "**Real-Time Object Detection and Tracking Using Deep Learning and OpenCV,**" ICIRCA

- Achieved ~94% mean accuracy using **SSD** and **MobileNets** algorithm trained on COCO dataset to detect 21 unique objects and conferred with **2nd position** in State Level Project Competition among 100+ teams