

ATUL LAL

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## EDUCATION

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**Boston University, Graduate School of Arts and Sciences, USA**

**December 2023**

Master of Science in Computer Science

GPA – 4.0/4.0

Relevant Courses: Advanced Algorithms, Graduate Computer Networks, Object Oriented Software Principles

**Bennett University, Greater Noida, India**

**June 2020**

Bachelor of Technology in Computer Science and Engineering

GPA – 8.18/10.0

Relevant Courses: High-Performance Computing, Data Structures, Artificial Intelligence, and Machine Learning, Big Data & Business Intelligence, Discrete Mathematical Structures, Information Management Systems

## PROFESSIONAL EXPERIENCE

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**Commvault Systems, Bangalore, India**

**July 2020 – August 2022**

*Software Engineer*

Commvault Backup & Recovery provides enterprise-grade protection and recovery of virtual machines, containers, databases, applications (including cloud), endpoints, and files.

- Worked on multiple full stack projects and applications involving technologies like C++, .NET Core, SQL Server, React and Java.
- Integrated webhook APIs with Commvault's alert system
- Developed and optimized multiple alert systems and syslog modules to save disk space and improve performance.

**Commvault Systems, Hyderabad, India**

**January 2020 – June 2020**

*Internship*

- Worked on multiple full stack projects and applications involving technologies like Angular JS and Java.
- Developed and integrated additional settings web application into Commvault's Command Center.
- Automated restful APIs using Python and Postman
- Created NLP based search system in Command Center

**Commvault Systems, Hyderabad, India**

**June 2019 – August 2019**

*Internship*

- Worked as full stack developer on various projects in the cloud services team in a 13-week internship using technologies like MongoDB, Express JS, Node JS and Angular.

**Docyt, USA**

**February 2019 – August 2019**

*Graphics and Communication Designer*

Docyt is a document driven automation system for small business back-offices. It uses AI and machine learning to extract data from docs and automate painful back-office tasks like Accounts Payable.

- Worked as part time graphics designer responsible for creating graphics and UI/UX elements.

## RESEARCH EXPERIENCE

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### Georgia Institute of Technology, Atlanta

June 2018 – July 2018

- Worked on solving minimum spanning tree of a graph using Boruvka's algorithm in a multi-threaded environment
- Tested the multi-threaded application on multiple high performance 200-core super computers to find bottlenecks and compare performance.

### Georgia Institute of Technology, Atlanta

July 2017

- Implemented multiple edge detection gaussian based and gradient based algorithms like Sobel, Canny edge and Prewitt algorithms.
- Tested and compared the algorithm and its results

## ACADEMIC PROJECTS

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### Video Compression using Deep Learning

- Worked on a DNN based model which compressed video files using autoencoders
- A compressed video matrix using vector decomposition, motion estimation and DNN based autoencoders
- Technologies used: Python, Keras, Node JS, React JS

### Tiny face detection in the wild

- Worked on Generative Adversarial Network based model which converts low-resolution images to high resolution
- This model was used to increase the resolution of tiny faces and improve accuracy of face detection on thermal images
- Technologies used: Python, Keras

### Smart news feed

- Developed a full stack web application to recommend news and articles collected from multiple sources
- Used collaborative filtering to recommend news to users
- Technologies used: Angular, Python, Django REST Framework

### Peer to peer messaging application

- Developed an IPFS based peer to peer messaging application
- Created an Android and IOS application
- Technologies used: React Native

## TECHNICAL SKILLS

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- Multiple programming languages & web technologies like C++, Javascript, Python, C#, Java and MEAN/MERN stack, Django, .NET core etc.
- Information management technologies like Mongo DB, SQL Server, MySQL, PostgreSQL, Cassandra
- Big data analytics using Hadoop, Spark and Pig.
- UI/UX Designing using Sketch, Adobe XD, Photoshop & Illustrator.