

# Visheshank Mishra

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## EDUCATION

**Northeastern University**, Boston, USA

September 2021 – December 2023

Master of Science | Major: Artificial Intelligence

**Related Courses:** Algorithms, Fundamentals of AI, NLP, ML, Programming Design Paradigm, Deep Learning, HCI, Data Mining Techniques

**Jaypee University of Engineering & Technology**, Guna, India

August 2014 – May 2018

Bachelor of Technology | Major: Computer Science & Engineering

## WORK EXPERIENCE

**Khoury College of Computer Sciences** | Graduate TA (Machine learning), Boston, MA

September 2022 – December 2023

- Created Assignments for **100+ students**, trained and assisted them in the use of **ML libraries**, software, and **ML algorithms**.
- Developed a grading matrix that reduced scores reporting time of instructors by **35%**.

**Sway AI** | Software Engineer co-op, Burlington, MA

January 2023 – August 2023

- Designed and deployed multiple microservices, which allows one-click stop functionality for **ML training** and inference operations within the pipeline. This led to a **35% reduction in Proof-of-Concept time** for our **Fortune 500 client** and **40%** cost saving for our organization.
- Utilized advanced **NLP tools** and services, including **LLMs**, to develop APIs that deliver static assistance on the product website. This simplified the product learning curve and amplified **user engagement by 25%**.
- Optimized the **ML** solutioning process by modifying multiple specific logical nodes into generic one, reducing user pipeline design time by **20%** and improving overall efficiency for users.
- Developed and executed a comprehensive test plan, including writing multiple **ROBOT tests**, resulting in a **30%** increase in service quality and a **35%** decrease in manual testing efforts.
- Executed the development of a high efficiency **microservice** for downloading visual data in CSV format.

**Shiryam Technologies** | Software Development Engineer, New Delhi, India

July 2020 – July 2021

- Lead backend development for building a **generic framework** for the **content management system**; this system can include different types of media and can be quickly modified and deployed as per the customer's needs.
- Developed multiple **server-less APIs** using Python, **AWS lambda**, **AWS S3 bucket**, and other Amazon web services.
- Worked intensely with the **front-end development** team to quickly adapt to the changes in requirements, resolve any present and forthcoming issues in the system, and reasonably future-proof it this increased team efficiency by **45%**.

**MapmyIndia** | Software Engineer, New Delhi, India

June 2018 – July 2020

- Led Development for in-car **Virtual Assistant** and its alpha version was showcased at **Auto-Expo 2020**.
- Co-led the research & development of **international address search APIs**; this helped the client ease the expansion of their business by **25%** in multiple countries.
- Developed, deployed, and maintained multiple search-related APIs (Geo-coding, Address Standardization, and Suggested Searches) and an **intent recognizer module**, which empowers those search APIs.
- Created data **visualizations** for **Vehicle Analytics** using **Plotly**, **Seaborn**, and other libraries; this helped clients understand critical information from raw data.
- Designed and developed solutions for multiple **location-intelligence** projects using **ML**, saving clients more than **20%** of operation costs.
- Developed critical solutions for internal **heterogeneous database migrations**, which saved **35%** of resources (Human & capital).
- Migrated whole Legacy Geo-coding code from **Java** to **Python** to leverage **ML Algorithms**.

## ACADEMIC & PERSONAL PROJECTS

- NLP Vectorizer Analysis:** Researched and experimented to establish a relationship between words and prime numbers using existing vectorization techniques on approximately 1 million prime numbers.
- Dungeon Game:** Developed a Graphically Interactive Dungeon Game in Java following MVC architecture to utilize and understand industry standard practices for large code base software development and maintenance.
- Telegram Bot:** Built a bot to encrypt, store, decrypt, and dispense site login credentials with 2048-bit RSA encryption.
- Hand Gesture Recognition:** Created a working prototype to recognize the hand gestures from a live video input stream and their corresponding numeric values. This was based on the idea to create an application that can control a machine using hand gestures.
- Music Genre Classification:** Pioneered a deep learning model that can predict a given song's music genre.

## TECHNICAL SKILLS

- Programming Languages:** Python, Java, SQL, C, C++, R
- Python Packages:** Pandas, Matplotlib, NumPy, SciPy, scikit-learn, NLTK, spaCy, Psycopg2, Selenium
- Software & Tools:** MATLAB, Tableau, JMeter, Postman, Weka, MS Office, Libre Office, LaTeX, MS-Excel
- Databases:** Elasticsearch, DynamoDB, MongoDB, PostgreSQL, Redis
- Work Domain:** API, Analytics, Visualization, Machine Learning, Natural Language Processing, Deep Learning
- Web Development:** Flask, Django, Gunicorn, uWSGI, Bjoern, Bottle, CherryPy, Falcon, ROBOT, Zappa, React
- Development:** Apache-Kafka, Plotly, PyTorch, TensorFlow, BERT, Spark, Hadoop, Jenkins
- AWS:** SageMaker, S3, EC2, Lambda, Step Functions, EMR, JumpStart
- Others:** PyCharm, Jupyter, IDLE, Spyder, Anaconda, IntelliJ, Windows, Linux Shell Script, GIT, JIRA, Confluence, Heroku