# Dhruv Agarwal

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## ACADEMIC QUALIFICATIONS

- **New York University, New York:** Master of Science in Computer Engineering (GPA:- 3.8)   **Sep 2021-May 2023**

  Coursework- Machine Learning, Deep Learning, High Performance for Machine Learning(HPML), NLP

- **Guru Gobind Singh IP University, India**: Electronics & Communications Engineering   **Aug 2016-Sept 2020**

## TECHNICAL SKILLS

| | | |
|---|---|---|
| Coding Languages | : | Python, Java, C, C++, HTML, JavaScript, SQL, Shell Scripting |
| Frameworks | : | MySQL, Django |
| Certifications | : | Python Data Structures, Getting started with python, CUDA Programming |
| Tools & Libraries | : | Linux, MATLAB, HPC, AVR, Arduino, Docker, IoT, SLURM, PyTorch, Scikit-learn, NumPy, AWS, EC2 |

## EXPERIENCE

**New York University, New York, USA:** *Machine Learning Graduate Course Assistant*   **Sep 2022-Dec 2022**

- Conducted engaging office hours to impart advanced Machine Learning concepts
- Provided individualized support in the creation and evaluation of assignments and exams for a class of 220 students

**Cosmos Technology, Hoboken, New Jersey, USA:** *Research Intern*   **Jun 2022-Jul 2022**

- Conducted in-depth research on cryptocurrencies and Metaverses using Python and its libraries, such as BeautifulSoup
- Built a large-scale containerized database of scraped cryptocurrencies on AWS, utilizing AWS services such as EC2
- Self-taught and applied advanced web scraping techniques to gather data from various sources

**Rice Lake Weighing System, Rice Lake, Wisconsin, USA:** *Software Engineer Intern*   **May 2022-Aug 2022**

- Developed and implemented a user-friendly configuration menu for a Linux-based Indicator
- Debugged and improved help files for the indicator using JavaScript, & achieved 100% accuracy through testing and debugging

**Accenture, Delhi, India:** *Associate Application Developer*   **Feb 2021-Aug 2021**

- Developed SAP PP system which monitors the production of coal
- Controlled client's production cost and optimized the bugs in the CIL manufacturing unit
- Trained in Java, SQL, and DBMS technologies and provide technical support

**Indira Gandhi Delhi Technical University for Women, Delhi, India:** *Trainee*   **Jan 2019-Feb 2019**

- Acquired a strong foundation in Machine Learning and Deep Learning models
- Familiarized with AI concepts & techniques

**DRDO, Delhi, India:** *Researcher*   **Jun 2019-Aug 2019**

- Conducted research on Miniature Electro-Mechanical technology and CZT Detector
- Designed and built a cutting-edge model to detect Hazardous Gases in the environment

## PROJECTS

**Debiasing the Word Embeddings (Python)**   **Nov 2022**

- Analyzed Gender and Racial biases present in Word Embeddings (Word2Vec) for English and Turkish Languages using similarity scores and natural language processing (NLP) techniques
- Successfully applied Debiasing algorithms, such as equalization, and soft and hard debiasing, to remove biases

**Implemented Deep learning residual networks (Python)**   **Apr 2022**

- Trained Resnet-18 model with 5 million parameters and achieved 91% accuracy through Deep learning techniques
- Explored various optimizers, such as SGD, Adam, RMSprop, and Adagrad, to fine-tune model performance
- Incorporated techniques such as Data Augmentation and Input normalization to improve model robustness

**Ethereum Transactions and Balance Using Etherscan API (Python)**   **Jan 2022**

- Tracked and visualized the balance of any Ethereum account using the Etherscan API and Python programming
- Plotted transactions using the Etherscan API and Python libraries such as Matplotlib for clear and concise data analysis

## PUBLICATIONS

- *Irrigation System using Arduino and Bluetooth module*. Presented at the International Research Journal of Engineering and Technology in June **2018**