Ayushe Gangal

MS CS @ UMass Amherst

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Education

University of Massachusetts Amherst   **September 2021 – May 2023**
Master of Science in Computer Science **GPA: 3.9/4.0**   *Massachusetts, USA*
Coursework: *Data Visualization, Software Engineering, Advanced Algorithms, Systems for Data Science, Machine Learning, Neural Networks* **Extra Curricular:** *Alumni-Mentorship Program (Menteed by Katie House, Founder of Hack(H)er413)*

Guru Gobind Singh Indraprastha University   **August 2017 – May 2021**
Bachelor of Technology in Computer Science and Engineering, **CGPA: 8.97/10,** *(Rank #2)*   *Delhi, India*
Coursework: *Data Structures, Algorithms Analysis, Operating Systems, Database Management, Programming Languages, Artificial Intelligence* **Coursera Specializations:** *Deep Learning, TensorFlow in Practice, AI in Medicine.*

Technical Skills

Languages: Python (Scipy, Numpy, Keras, TF, PyTorch, OpenCV, Pandas), SQL, Java, C, C++, HTML, CSS, JavaScript, Latex. **Developer Tools**: VS Code, Eclipse, Google Colab, XCode, Spyder, Jupyter, WordPress

Experience

G.B. Pant Govt. Engineering College   **August 2018 – September 2020**
Research Assistant   *Delhi, India*
- Researched on Algorithms and Mathematical Machine Learning, and published 6 research articles in International Journals. Utilized Google Colab and majorly worked on Health Informatics using Python. Major published articles:
  * **Patent:** Peeyush Kumar, Ayushe Gangal, Sunita Kumari, Aditya Kumar, Dr. Vivek Jaglan (2020), GENigma(MayhemNet): Canalizing Stochasticity of Neural Nets into an Insurmountable Encryption Machine (No.: 202011037028; Journal Number: 39/2020)
  * **Intl. J.:** WisdomNet: Prognosis of COVID-19 with Slender Prospect of False Negative cases and Vaticinating the Probability of Maturation to ARDS using Posteroanterior Chest X-Rays. In Spec. Issue of the Journal of Pure and Applied Microbiology (JPAM).
  * **Intl. J.:** Recombinant Sort: N-Dimensional Cartesian Spaced Algorithm Designed from Synergetic Combination of Hashing, Bucket, Counting, and Radix Sort. In Ingénierie des Systèmes d'Information.
  * **Intl. Conf.:** GENigma(MayhemNet): Canalizing Stochasticity of Neural Nets into an Insurmountable Encryption Machine. At the International Conference on Networks and Cryptology (NetCrypt), JNU, New Delhi, India
  * **Intl. Conf.:** Prognosis of Breast Cancer by implementing Machine Learning Algorithms using Modified Bootstrap Aggregating. At the International Conference on Innovations in Computational Intelligence and Computer Vision 2020 at Manipal Jaipur) Published in Lecture Notes Series of Springer-Nature. (DOI: 10.1007/978-981-15-6067-5)

Tech Mile   **June 2019 – September 2019**
Software Developer Intern   *Delhi, India*
- Assisted in developing Suspicious Activity Detection Software. Implemented algorithms like Image recognition and Object identification on real world data. Performed work-load analysis and performance tuning.

Projects

Subway Train Seat Occupancy Detection | Bachelor's Major Project | *Python, Tkinter, Google Colab*   **June 2021**
- Designed and Implemented a subway train seat occupancy detection system using Computer Vision Algorithms in Python 3.7, which can use the existing CCTV cameras in the train to collect real-world data.
- Engineered a UI using Tkinter for passengers to keep track of vacant seats and the overall distribution of crowd in train, and also implemented the system to detect the people not wearing face masks and breaking the social distancing norms.
- Received "Best and Most Creative Project" Award for this project

Brain Tumor Detection using Quantum Convolutional Neural Networks | *Python, Google Colab*   **January 2021**
- Performed brain tumor segmentation on brain MR images using Quantum Convolutional NN, and classified the tumors into Glioma, Meningioma and Pituitary tumors.
- Proposed a hybrid architecture, integrating the quantum architecture with the State-of-the-art CNN architecture using Google's TensorFlow and TensorFlow Quantum.

Breast Cancer Prediction using Ensemble Techniques | *Python, Tkinter, Spyder*   **December 2019**
- Predicted breast cancer using various ensemble techniques and carried out a cogent analysis of the same. Received A+ in this Industrial Project.

Honors/ Awards

- Invited as a speaker to deliver a lecture on the paper "WisdomNet" in the International Conference on Clinical and Pharmaceutical Microbiology, Paris, France (19th-22nd May) 2021.
- Awarded 'Certificate of Appreciation' for presenting the paper "Prognosis of Breast Cancer" at ICICV 2020.
- Qualified Nationals for the Vishwakarma Awards 2019, organized by AICTE (All India Council for Technical Education), project name: Artificial Intelligence Based Platform For Skill Development And Marketing In Rural Areas.