

Kartik Aggarwal

✉ kartik.mp.16@nsit.net.in

🌐 kartikaggarwal.me

🐙 github.com/kartikaggarwal98

EDUCATION

B.E. in Manufacturing Processes and Automation | CGPA: 8.04/10

Netaji Subhas Institute of Technology, University of Delhi | 2016-20

Featured Coursework: Artificial Intelligence, Natural Language Processing, Operations Research, Simulation and Modelling, Automation in Engineering

AthNLP Summer School, 2019, Greece | Acceptance Rate: 18%

National Centre of Scientific Research "Demokritos" | September 2019

Featured Coursework: Language Modelling, Machine Translation, POS-Tagging

High School | CBSE- XII: 90.2% , X: 9.2 CGPA

Jesus Mary Joseph Senior Secondary School | 2008-15

PUBLICATIONS

"Design and Analysis of Adaptive Graph-based Cancelable Multi-Biometrics Approach", 2020

Accepted as regular paper at IEEE Transactions on Dependable & Secure Computing

"NSIT@NLP4IF-2019: Propaganda Detection from News Articles using Transfer Learning"

NLP for Internet Freedom, EMNLP-IJCNLP 2019, Hong-Kong, p.143,

"MIDAS at SemEval-2019 Task 9: Suggestion Mining from Online Reviews using ULMFit"

In Proceedings of the 13th International Workshop on Semantic Evaluation (SemEval 2019), NAACL, Minnesota, USA, (pp. 1213-1217)

EXPERIENCE

Scientific Analysis Group, Defense Research and Development Organization, India |

Aug'18-March'19

Research Assistant in Multimodal Biometric Recognition, Supervisor: *Dr. Gurjit Singh Walia*

- Proposed a novel multimodal cancelable biometric system using a Graph-based Fusion approach.
- System tested against various state-of-the-art fusion methods on IITD-Iris and MMU2 Iris benchmark datasets. Security and Privacy analysis performed against various adversary attacks.

CampK12, Gurgaon, Delhi | May'19-July'19

Machine Learning Instructor

- Taught machine learning and computer vision to high school students offline. Designed and recorded an online video course covering Python, Computer Vision, and ML. Organized live AI sessions every week.

Shopnani, Delhi | Aug'17-Dec'17

Full-Stack Developer

- Responsible for all aspects of IT planning and implementation for ShopNani.com
- Developed an interactive and dynamic website using MEAN stack and various other services that ensured high traffic, page views, and quality User Experience.

RESEARCH PROJECTS

CNN-based Android Malware Detection using static analysis, Mentor: *Sumit Kumar*, DRDO
Convolution Neural Network, Static and Dynamic Analysis, Android Architecture | June'18 - July'18

- Built a CNN-based malware detection system for android apps using features such as API sequence, permissions, and system commands. Apps were decompiled to obtain features and the system achieved 78% accuracy in classifying apps as malware or benign.

Content-based music recommendation, Mentor: *Dr. Vikas Maheshkar*, NSIT

NLP, Conditional Probability, Audio Feature Extraction | June'18 - July'18

- Designed a Content-Based Music Recommender System using language features. Songs were recommended by minimizing the KL-divergence between joint probability distributions of multiple documents.
- Worked on Audio Analysis using timbral and pitch feature extraction methods such as pitch spectrogram, MFCC, spectral contrast, etc.

TECHNICAL SKILLS

Programming: Python, C/C++, MATLAB | **Databases:** MySQL, PostgreSQL

Frameworks: PyTorch, Keras, Fastai, OpenCV, Sci-Kit | **Other:** Django, MEAN Stack

ACADEMIC HONORS

Shared Task-9, SemEval, 2019

Rank 10 (among approx. 50 teams globally)

CVIT Summer School, IIITH, 2019

Selected (Acceptance Rate: 28.5%)

Coding Blocks Hackathon, 2016

Rank 1 (among approx. 100 participants)

Jee Mains'15

All India Percentile 98.3 (among approx. 1.5 million students)