Konark Jain

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Portfolio: http://konqr.github.io

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI
BTech in Electronics and Electrical Engineering with Minor in Mathematics
Expected Apr 2020 | Guwahati, India
Major GPA: 8.52
Minor GPA: 8.40

MVN SCHOOL, ARAVALI HILLS
Grad. May 2016| Faridabad, India
Senior Secondary Result: 93.0%
High School Grade: 10.0

COURSEWORK

UNDERGRADUATE
Mathematical Statistics
Scientific Computing
Advanced Linear Algebra
Probability and Random Processes
Digital Signal Processing
Principles of Communication
Signal and Systems
Digital & Analog Design

MOOCS
Machine Learning
Deep Learning
Structuring Machine Learning Projects
Convolutional Neural Networks
Natural Language Processing*
Bayesian Methods for Machine Learning*
Data Structures and Algorithms

*Ongoing Courses

SKILLS

Programming Languages:
Python • C++ • MATLAB • Java*
Python Libraries:
Tensorflow • Keras • PyTorch*
Web Technology:
HTML • CSS
Miscellaneous:
Android Programming • LaTeX
Operating Systems:
Linux • Windows

*Elementary Proficiency

EXPERIENCE

THE UNIVERSITY OF SYDNEY | Research Intern
May 18 - Jul 18 | Sydney, Australia
- Formulated the methodology of Parallel Tempering for Bayesian Neural Nets
- Implemented it with multi-threading on High Performance Computers cutting down the running time by a factor of two.
- Further investigated usage of surrogate assisted optimization that reduced the time of computation by another half.

DRDO | Research Intern
Dec 17 - Jan 17 | New Delhi, India
- Developed a Convolutional Neural Network architecture for unconstrained face recognition on multiple datasets for real time applications.
- Performance of the network developed in Tensorflow matched the state of the art methods achieving close to perfect accuracy on some datasets.

DELHI TECHNOLOGICAL UNIVERSITY | Research Intern
May 17 - Jul 17 | New Delhi, India
- Applied Machine Learning models like ANN, SVM & KNN to Skeleton Based Human Activity Recognition for RBG-D video sequences in MATLAB.
- Classification of 20 activities could be achieved with record 94.22% accuracy.
- Developed a novel "Movement Polygon Mapping" technique of dimensionality reduction of 4D RGBD Video Sequences to a 1D vector.

PUBLICATIONS

• R. Chandra, K. Jain, A. Kapoor, **"Surrogate-assisted parallel tempering for Bayesian neural learning"** , in IEEE TNNLS (Under Review)

• R. Chandra, K. Jain, R. Deo, S. Cripps, **"Langevin-gradient parallel tempering for Bayesian neural learning"** , in Neurocomputing (Under Review)

• D.K. Vishwakarma and K. Jain, **"Human Activity Recognition using Movement Polygon in 3-D Posture Data"** , in IEEE Transactions on Human-Machine Systems (Under Review)

OPEN SOURCE CONTRIBUTION

HEPDrone | CERN
Developing Drone Neural Network to approximate the computationally expensive machine learning models used for processing large data in minimum time.

POSITIONS OF RESPONSIBILITY

IITG.AI | Co-Founder
Apr 18 – Present | Guwahati, India
IITG.ai is the AI community of IIT Guwahati for nurturing talent among the students and to establish collaborative projects with experts all around the world.

CODING CLUB IITG | Machine Learning Head
Apr 18 - Present | Guwahati, India
Supervision of the projects undertaken by the coding club of IITG in the fields of Machine Learning, Deep Learning and Artificial Intelligence.

CEPSTRUM | Associate General Secretary
Apr 18 - Present | Guwahati, India
CEPSTRUM is the student body of the Department of EEE, IITG. My duties include spearheading a 40 member team to perform various departmental activities.