

# 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: 8.56

Minor GPA: 8.31

### MVN SCHOOL, ARAVALI HILLS

Grad. May 2016 | Faridabad, India

Senior Secondary Result: 93.0%

High School Grade: 10.0

## COURSEWORK

### UNDERGRADUATE

Optimization Methods\*

Speech Recognition and Coding\*

Advanced Probability & Random Process\*

Mathematical Statistics

Scientific Computing

Advanced Linear Algebra

Pattern Recognition & Machine Learning

Advanced Control Systems

Modern Algebra

### MOOCS

Machine Learning

Deep Learning

Convolutional Neural Networks

Natural Language Processing

Bayesian Methods for Machine Learning

Reinforcement Learning

Data Structures and Algorithms

*\*Ongoing Courses*

## SKILLS

Programming Languages:

Python • C++ • MATLAB

Python Libraries:

Tensorflow • Keras • PyTorch • Pandas

Web Technology:

HTML • CSS

Miscellaneous:

LaTeX • MySQL

Operating Systems:

Windows • Linux

## EXPERIENCE

### JP MORGAN & CHASE | QUANTITATIVE RESEARCH INTERN

May 19 - Jul 19 | Mumbai, India

- Worked on topics of Machine Learning with outlier handling for Market Risk Prediction as a part of the Market Risk team.
- Developed various regression algorithms to estimate and replace very expensive services required by the firm for risk calculation in Commodities LOB.

### THE UNIVERSITY OF SYDNEY | RESEARCH INTERN

May 18 - Jul 18 | Sydney, Australia

- Developed algorithm for Parallel Tempering on Bayesian Neural Nets and implemented it with multi-threading cutting down the running time to half.
- Run time was then reduced by another factor of two by using surrogate assisted optimization.

### DEFENCE RESEARCH AND DEVELOPMENT ORG. | 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

- Classification of 20 activities could be achieved with record 94.22% accuracy for Human Activity Recognition for RGB-D video sequences.
- Developed a novel "Movement Polygon Mapping" technique of dimensionality reduction of 4D RGBD Video Sequences to a 1D vector.

## PUBLICATIONS

• R. Chandra, K. Jain, R. Deo, S. Cripps, "Langevin-gradient parallel tempering for Bayesian neural learning", accepted in Neurocomputing Journal 2019

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

## 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.

### CEPSTRUM | GENERAL SECRETARY

July 19 - 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.

### CODING CLUB IITG | MACHINE LEARNING HEAD

Apr 18 - Apr 19 | Guwahati, India

Supervision of the projects undertaken by the coding club of IITG in the fields of Machine Learning, Deep Learning and Artificial Intelligence.