

KARAN PRAHARAJ

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EDUCATION

Shiv Nadar University, Greater Noida
Electronics and Communication Engineering

July 2015 - May 2019

PACE Junior Science College, Mumbai
Higher Secondary School Certificate - Pass
First in class in Computer Science (200/200)

August 2013 - May 2015

Lokhandwala Foundation School, Mumbai
Indian Certificate of Secondary Education - Pass
First in class in Computer Application (100/100)

June 2000 - May 2013

TECHNICAL SKILLS

**Computer Languages,
Software & Tools**

C, Python, Tensorflow, JavaScript, Django
HTML, CSS, Photoshop, PHP, AJAX, Angular

RESEARCH PROJECTS

Patch-based Identification of Lexico-Semantic Relations

Nov 2019 - ongoing

Advisor : [Professor Gael Dias](#)

University of Caen, Normandy

- Working as a research assistant in the [GREYC Research Lab](#) at the University of Caen Normandie, France. (HULTECH group - HUman Language TECHnology)
- The aim of the project is to devise multi-task strategies for the identification of lexico-semantic relations like hypernymy, synonymy, meronymy and co-hyponymy between a pair of words.
- We use word patches (the k closest neighbours to the words) to identify
- Received a full travel grant and subsistence allowance.

Paper Review Alignment System

Jan 2019 - June 2019

- Developed an automated academic conference review matching system using Machine Learning, Natural Language Processing and Information Retrieval, at the [Centre for Visual Information Technology](#) at IIT Hyderabad.
- The system incorporates statistical machine learning to automate the process of assigning submitted research papers to the most suitable reviewer (based on domain expertise) and thereby, consequentially raise the percentage of expert reviewers by a significant margin.
- *Algorithms used* : Latent Dirichlet Allocation, Latent Semantic Indexing

Ensemble Learning for Regression Applications

July 2018 - Jan 2019

- Analysed the performance (in terms of accuracy and robustness) of ensemble algorithms like Bagging, Boosting and Random Forests against the performance of other machine learning algorithms like Support Vector Regression, Lasso and Ridge Regression, Neural Network Regressor, k-NN and k-means clustering.

RFID based Navigation System for the Visually Impaired

Jan 2018 - May 2018

- Developed an RFID based system to assist the blind find and identify an object in their proximity. The model uses two-way localization, one using acoustic stimuli and the other using RFID.
- The proposed model provides an affordable solution to the existing problem of lack of sophisticated technological assistance to the VIPs.
- **Published in:** [32nd International Conference on VLSI Design and 2019 18th International Conference on Embedded Systems \(VLSID\)](#)

TEACHING EXPERIENCE

Teaching Assistant, TalentSprint

Spring 2019

Foundations of AI and ML (Industry Course)

IIIT Hyderabad

- Taught basic concepts of Machine Learning and Deep Learning techniques for Computer Vision and Natural Language Processing.
- Designed & graded assignments, evaluated exams, conducted tutorials and mentored lab sessions.

Undergraduate Teaching Assistant, Shiv Nadar University¹

Monsoon 2017

Engineering Mathematics

- Conducted tutorial sessions for 1st Year B Tech students (average class strength of 70).
- Responsible for grading assignments, quizzes, mid-terms and final-term examinations.

Undergraduate Teaching Assistant, Shiv Nadar University²

Monsoon 2018

Introduction to Calculus

- Taught introductory concepts of college mathematics to a freshman class of strength 20.
- Covered concepts like Sets, Functions, Limits, Continuity and Differentiability.

CERTIFICATIONS

[An Introduction to Linguistics](#)

Summer 2019

Universiteit Leiden Meertens instituut - Coursera

[Neural Networks and Deep Learning](#)

Summer 2018

deeplearning.ai - Coursera

[Hyperparameter tuning, Regularization and Optimization](#)

Summer 2018

deeplearning.ai - Coursera

[Structuring Machine Learning Projects](#)

Summer 2018

deeplearning.ai - Coursera

[Convolutional Neural Networks](#)

Summer 2019

deeplearning.ai - Coursera

[Sequence Models](#)

Summer 2019

deeplearning.ai - Coursera

¹Under Prof. Ajit Kumar (Asst. Prof., Dept. of Mathematics) - PhD, University of Houston

²Under Prof. Amber Habib (Head, Dept. of Mathematics) - PhD, University of California, Berkeley

CONFERENCES ATTENDED

CyFy 2019 - Technology, Security and Society (New Delhi, India)

14th-16th Oct 2019

- Received full travel and accomodation grant.

COURSEWORK (SELECTED)

Applied Machine Learning

Data Structures

Calculus & Linear Algebra

Computational Partial Differential Equations

Digital Signal Processing

Introduction to Computing and Programming

Probability and Statistics

Communication Networks

POSITIONS OF RESPONSIBILITY

Secretary of Food Affairs

SNU Food Committee

May 2017 - April 2019

Shiv Nadar University

- Oversaw all things related to food and drink on campus and acted as a conduit between university administration, food vendors and the university community of close to 2300 people.
- Spearheaded a team of 13 people to draft a constitution and have it ratified.
- Successfully organized a Food Festival which had a footfall of 800+.
- Introduced benchmarks for food quality and hygiene, an increased variety of food options.

President

FACTion - SNU's Quizzing Society

February 2017 - February 2018

Shiv Nadar University

- Presided over 8 quizzes in my tenure. Average attendance of each quiz was over 80.
 - Organised F! - The Inter-college Media and Entertainment quiz. Signed up three sponsors, who helped us give out an overall prize money of Rs. 30000.
 - Served as club designer in the previous term.
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