Prakhar Ganesh

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EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY (IIT) DELHI
BTech in Computer Science and Engineering
2015 - 2019
Cum. GPA: 7.84

DAV PUBLIC SCHOOL, KOTA
Class XII, CBSE
2015
Percentage: 92.4%

ST. PAUL'S SR. SEC. SCHOOL, SIROHI
Class X, CBSE
2013
Cum. GPA: 10.0

LINKS

Github:// **prakharg24**
LinkedIn:// **prakharg24**
HomePage:// **cs1150245**

COURSEWORK

Natural Language Processing
Machine Learning
Artificial Intelligence
Digital Image Analysis
Data Mining
Spl. Module In Artifcial Int.
Design Practices
Minor Design Projects
Fundamentals of Language Sciences
Computer Networks
Parallel Computing
Operating Systems
Computer Architecture
Digital Logic
Theory of Computation
Programming Languages
Data Structures & Algorithms
Discrete Mathematics
Linear Algebra.
Prob. & Stochastic Processes

TECHNICAL SKILLS

PROGRAMMING LANGUAGES
C, CPP, Python, Java, OCaml, Prolog, VHDL, Visual Basic

FRAMEWORKS
OpenCV, OpenMP, MPI, Git, Tensorflow, PyTorch, Keras, Socket, Pandas, Numpy

INTERNSHIPS & MAJOR PROJECTS

SUMMER RESEARCH INTERN | Encoding Methods in Genomics
May'17-July'17 | Under Prof. Kolin Paul, IIT Delhi
- Developed a novel encoding method, Nucl2Vec, for Genome variant calling
- Based on Skip-Gram model, providing a distributed vector representation.
- About 3 times faster than the existing state of the art in NGS Read Alignment.
- 97% accuracy against the existing defacto standard BWA-MEM alignments.

DATA ANALYST | Deep Reinforcement Learning in HFT
May'18-July'18 | WealthNet Advisors, Delhi
- Literature Review and Performance comparison of existing ML techniques.
- Developed a pipeline based on Deep RL Models.
- Introduced a novel way of modeling the HFT problem statement.
- Complete pipeline integrated to the company's trading module in C++.

BACHELOR'S THESIS PROJECT | Pose Estimation and Tracking
Aug'18 - Present | Under Prof. Rahul Garg, IIT Delhi
- Consolidation of existing DL techniques, Body Models and Vision Features.
- Feature creation and Interpretation of data from kinect & synthetic animations.
- Targeting the domain of Yoga posture stability, which includes obscuring postures and unconventional extensions of the body.
- Move towards multiple cameras multiple people human pose estimation.

OTHER PROJECTS

ABSTRACTIVE SUMMARIZATION OF DIALOGUES
March'18 – May'18 | Natural Language Processing, Prof. Mausam, IIT Delhi
- Pointer Generator Network and Coverage on top of Attention based model.
- Provide a graph structure to conversations from discourse relations using CRF.
- Extractive summary from graph followed by final abstractive summarization.
- BLEU scores comparable to the state of the art. Check working model here.

AUDIO TACTILE READER FOR VISUALLY CHALLENGED
Jan'17 - Apr'17 | Design Practices, Prof. M. Balakrishnan, IIT Delhi
- Android App for real time finger gestures and movement detection.
- Windows app for automated data generation and mapping to Vector images.
- Presented live demo for visually challenged in IITD Open House. Blog link.

GENOME VARIANT CALLING USING CNN
Aug'17 - Nov'17 | Minor Design Project, Prof Kolin Paul, IIT Delhi
- Designed a novel CNN based DNA alignment model achieving good speedups.
- Integrated with DAVI (DL based Single Nucleotide Variant identification).
- Collaborated with M.Tech students to complete the variant calling pipeline.

COURSE PROJECTS
- Parallel Multi-level Graph Partitioning – Parallel Computing
- ARM Processor State Machine and Simulator – Computer Architecture
- Krivine and SECD Machine in Ocaml – Programming Languages
- Implementation of all common ML algorithms – Machine Learning

HOBBIES

Dance, Sketching, Debating, Painting, Basketball