Noveen Sachdeva

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Education

IIIT Hyderabad   *India*
B.Tech & M.S (by research) in Computer Science, GPA: 8.64/10   *May 2015 - PRESENT*
Advisor: Prof. Vikram Pudi   *Expected: May 2020*

Experience

UC San Diego   *San Diego, CA*
Research Intern   *Aug. 2019 - PRESENT*
- Working with Prof. Julian McAuley and his group on explainable recommendation systems.

Cornell University   *Ithaca, NY*
Research Intern   *Jun. 2019 - Jul. 2019*
- Worked with Prof. Thorsten Joachims and his group on counterfactual learning and causal inference.
- Project focused on making off-policy learning from biased, logged contextual-bandit feedback data more robust.

PwC - PricewaterhouseCoopers   *Tampa, FL*
Data Science Intern (Remote)   *Aug. 2018 - Nov. 2018*
- Worked with the data science and innovation team on clause extraction from sensitive documents.
- Formulated a de-generate pipeline and compared different statistical and deep-learning based models for the given task.

National Research Council of Italy   *Rende, Italy*
Research Intern   *May. 2018 - Jul. 2018*
- Worked with Prof. Giuseppe Manco on building better, novel sequential-recommender systems.
- The project's findings were later published at WSDM '19.

Google Summer of Code   *Nuremberg, Germany*
ownCloud   *May. 2017 - Aug. 2017*
- Leaded the project of completely re-designing ownCloud's back-end, significantly faster than the exisiting.
- Implemented a JS-library, complete with unit-tests and swagger-documentation. Works both on Node.JS and browser.

Google Code-In Mentor   *Hyderabad, India*
JBoss, Redhat   *Dec. 2017 - Jan. 2018*
- Guiding participants in solving byte-sized tasks in Python, JavaScript and HTML.

IIIT Hyderabad   *Hyderabad, India*
TA & System Administrator
- Web-System Administrator   *Monsoon 2017, Spring 2018*
- TA for Data Warehousing and Data Mining (CSE445)   *Monsoon 2018*
- TA for Database Systems (CSE441)   *Spring 2019*

Publications

Sequential Variational Autoencoders for Collaborative Filtering   *LINK*
Noveen Sachdeva, Giuseppe Manco, Ettore Ritacco, Vikram Pudi
In the 12th ACM International Conference on Web Search & Data Mining (**WSDM**), 2019

Attentive Neural Architecture Incorporating Song Features For Music Recommendation   *LINK*
Noveen Sachdeva, Kartik Gupta, Vikram Pudi
In the 12th ACM International Conference on Recommender Systems (**RecSys**), 2018

Explicit Modelling of the Implicit Short Term User Preferences for Music Recommendation   *LINK*
Kartik Gupta, Noveen Sachdeva, Vikram Pudi
In the 40th European Conference on Information Retrieval (**ECIR**), 2018

Achievements

- Qualified for ACM ICPC Asia Onsite Regionals 2017-18 *Online: 95th (out of 3000+ teams)*
- Dean's Award for Academic Excellence: Top 10% of batch *(2018)*
- Dean's Research Award for exceptional undergraduate research work at IIIT Hyderabad *(2018)*
- Reviewer for the IEEE's International Conference on Data Mining (**ICDM**) *(2018)*
- Reviewer for the AAAI Conference on Artificial Intelligence (**AAAI**) *(2019)*
- Recieved generous travel grant from SIGIR & Flipkart to present at WSDM *(2019)*

Research Projects

Generative models for Stochastic Point Processes

REMOTE COLLABORATION WITH *Prof. Giuseppe Manco* *Jan. 2019 - PRESENT*

- Leveraging the modelling power of weibull distributions to predict user return-time to a media-streaming-service like YouTube, Netflix etc.
- Formulating and experimenting with generative models like GANs & VAEs; maximizing the likelihood of the actual return-time.

PEGASOS: Gradient based solver for SVM

OPTIMIZATION METHODS COURSE PROJECT UNDER *Prof. C V Jawahar* *Mar. 2019 - May. 2019*

- Implemented both linear and kernelized PEGASOS in python, results matching with popular libraries like sklearn.
- Used a Gramian Matrix to speed up the learning process for kernelized PEGASOS.

Scholarly Article Recommendation

HONORS PROJECT UNDER *Prof. Vikram Pudi* *Jan. 2018 - Apr. 2018*

- Developed a novel LSTM based architecture to recommend relevant scientific articles to users.
- Leveraging article content and read history to recommend.

Deep Sequential Models for Language Modeling

INTRO. TO ML COURSE PROJECT UNDER *Prof. Vineet Gandhi* *Oct. 2017 - Dec. 2017*

- Implemented various state-of-the-art models for language modelling.
- For the given dataset, a CNN+LSTM model for extracting word and character level features from text gave the best BLEU score.

Software Projects

Compiler for Decaf

COURSE PROJECT UNDER *Prof. Suresh Purini* *Oct. 2018 - Dec. 2018*

- Developed an end-to-end compiler for given C-like language, decaf.
- Used Abstract Syntax Trees as an intermediate representation, and visitor design pattern to implement.

Mini-Dropbox

COURSE PROJECT UNDER *Prof. Moumita Patra* *Mar. 2017 - May. 2017*

- Implemented an Application Level program for a P2P-network to keep two separate directories synced, similar to Dropbox.
- Used scokets to communicate; maintained file-indices, and MD5 hashes on all peers.

Linux Shell

COURSE PROJECT UNDER *Prof. P K Reddy* *Sep. 2016 - Dec. 2016*

- A Bash like shell for Linux, with extensive error-handling, support for piping and redirection, implemented in C only using sys-calls.

Relevant Coursework

- Advanced NLP
- Artificial Intelligence
- Advanced Algorithms
- Data Warehousing and Data Mining
- Distributed Systems
- Database Systems
- Introduction to Machine Learning
- Linear Algebra
- Operating Systems
- Optimization Methods
- Structured Systems Design

Skills

Languages	Python, C++, C, JavaScript, MATLAB, PHP, Bash
Machine Learning	PyTorch, Tensorflow, Keras, scikit-learn
Miscellaneous	SQL, Git, LaTeX, Neo4J, Flask, Node.JS