Siddharth Dixit

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EDUCATION

SHIV NADAR UNIVERSITY
BS IN MATHEMATICS (MAJOR) & COMPUTER SCIENCE (MINOR)
SPECIALIZATION: ARTIFICIAL INTELLIGENCE
2017-2021 | India, 201314
CGPA $7.63/10$
INTERMEDIATE: 94%
HIGH SCHOOL: 93.4%
(aggregate of 99% in Maths & CS)

RELEVANT COURSES

- Time Series & Forecasting
- Bayesian Networks
- Deep Learning
- Machine Learning through R
- Optimization
- Big Data Technologies
- Mathematical Finance
- Partial Differential Equations
- Dynamical Systems
- Design and Analysis of Algorithms
- Linear Algebra- I, II
- Probability and Randomized Algorithms
- Genetic Algorithms

SKILLS

PROGRAMMING LANGUAGES
• Python • R • Java • C • SQL

TOOLS & FRAMEWORKS
PYTHON
• Scikit Learn, Keras, H_2O, Flask, Tensorflow, Pyspark
R
• Caret, AutoML, BNlearn, Keras
• Model specific packages in R

OPEN SOURCE

Contributed to projects on Causal ML:
• Microsoft DoWhy
• Microsoft DICE

WORK EXPERIENCE

CAUSAL AI CONSULTANT, CAUSALENS
Dec 2020-May 2021 | London, UK (Remote due to COVID-19)
• Worked as an intern with the Marketing & Applied Data Science (ADS) teams.
• Researched and developed over 50 innovative business use-cases for Causal AI in Banking, Marketing, Insurance, Telecommunications, E-commerce & Retail, Manufacturing & IOT, Transport & Logistics among other industries.
• Carried out proof-of-concept data science work for:
  - Credit Risk Modeling in SME Lending [White Paper]
  - Predictive Lead Scoring for B2B businesses
• Assisted ADS with data science work for client projects
• Suggested improvements to core product by reviewing latest research on Causal Machine Learning

TEACHING ASSISTANT, SNU
Aug-Nov, 2020 | Delhi (NCR), India
• Head Teaching Assistant for MAT-494: Deep Learning for Predictive Modeling [Course Page] being taught to 3^{rd} & 4^{th} year students at Shiv Nadar University.
• Conducted lab sessions in R & Python with a focus on solving business problems using Predictive Modeling.
• Supervised 7 student projects on using Deep Learning to solve problems in Healthcare, Banking, Asset Management & CRM.

VISITING RESEARCH SCHOLAR, UNIVERSITY OF LUXEMBOURG
Feb-Mar, 2020 | Luxembourg City, Luxembourg
• Conducted research on Physics inspired Machine Learning and Machine Learning led discovery of new materials under the guidance of Prof. Stephane Bordas.

DSG PARTICIPANT, ALAN TURING INSTITUTE
AUG 2019 | Bristol, UK
• Part of a cross-functional team of 10 researchers and data scientists tasked to tackle the problem of Air Pollution in Bristol City Center using Machine Learning.
• Worked on identifying location-wise NO_x predictors & developing Predictive ML models linking Climate & Air Pollution Data.
• Collaborated closely with the team working on Traffic Data.
• Analyzed the model results & provided data-driven suggestions which could be used by the Bristol government to reduce air pollution in their City Center.

PUBLICATIONS

CONFERENCES
• "Machine learning approaches to identify and design low thermal conductivity oxide alloys for thermoelectric applications"

1. 2019, ECI: Composites at Lake Louise, Alberta, Canada(Accepted but not presented)
2. FAIRDI for Materials Genomics, Berlin 3-5 June, 2020

JOURNAL
• "Get Bristol moving: Tackling air pollution in Bristol city centre" - Grey Paper by Alan Turing Institute.
• "Network learning approaches to study Happiness"- Arxiv Pre-print.
• "Machine learning approaches to identify and design low Thermal Conductivity Oxide Alloys for Thermoelectric applications"- in Cambridge University Press.

PAST RESEARCH PROJECTS (SELECTED)

FROM PREDICTING TO UNDERSTANDING WORLD HAPPINESS Aug 2019- July 2020

• Performed literature review on using AI techniques for studying Happiness and Loneliness
• Built a series of Panel ML, Deep Learning models on UN data to accurately forecast a countries Happiness Index
• Learned a Bayesian Network to understand the changes in world happiness with changes in macro-economic, social & personal factors.

FORECASTING POLLEN CONCENTRATION LEVELS IN LUXEMBOURG Jan-Feb 2020

• Pre-processed open pollen data recorded daily from 1992-present.
• Studied the factors & climatic conditions affecting Pollen concentrations of 31 different species found in Luxembourg and their associated harmful effects on human health
• Built 5 different types of RNNs viz. Multivariate RNN, Elman Network, Jordan Network, GRU, LSTM to accurately forecast pollen concentration levels- with the best model yielding <10% MAPE.

MACHINE LEARNING LED DISCOVERY OF NOVEL MATERIALS Nov 2019- July 2020

• Developed a 2 step Machine Learning approach to deal with small datasets frequently encountered in Materials Informatics.
• Built soft voting classifiers to model highly imbalanced data.
• Modfied Classification to an Anomaly detection problem for identifying new and promising Thermoelectric Oxides from over 2000 unexplored compounds.

BLOG ARTICLES

•"Beyond Predictions: The causal story behind Hotel Booking cancellations" in TowardsDataScience, 2020- also featured by Microsoft Research
•"Predicting Bank Churn using Deep Learning" in TowardsDataScience, 2018
•"Predicting product sales through ads delivered on Social Networking Sites" in Coinmonks, 2018
•"An Essential Guide to Numpy for Machine Learning in Python" in BecomingHuman.ai, 2018

POSITIONS OF RESPONSIBILITY

FOUNDER- SNU.AI Oct 2019- Nov 2020 | Shiv Nadar University

• Appointed by the Director of Research at my university to start a club that encourages AI research at the undergraduate level.
• Formed the core committee by interviewing over 50 candidates and started SNU.ai
• The club gained immense popularity and over a period of 1 year, I mentored over 100 undergrads to learn ML and apply it to research projects within their field of interest.
• Organized talks & webinars with eminent AI researchers from different parts of the world.
• Started a Medium Publication where students from the club wrote articles on AI & its applications.

ACCOMPLISHMENTS

• Awarded Vice Chancellors funding of $1100 as travel scholarship.
• Youngest participant to be selected amongst 50 AI researchers to participate in Data Study Group organized by the Alan Turing Institute & hosted by the University of Bristol.
• Won 2nd Prize of the dot tech Category & a registered domain for 1 year for our Web App Emozers- an emotion based music web-application- in Hack Data 2018
• Awarded a scholarship of 50% on the Tuition Fee for pursuing a BS in Mathematics & Computer Science at Shiv Nadar University, India.