PRABHNOOR SINGH

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ACADEMIC QUALIFICATION

Bachelor of Technology in Computer Science, Maharaja Agrasen Institute of Technology, Guru Gobind Singh Indraprastha University (GGSIPU), New Delhi, India, Expected Completion: 2015 - August 2019, **CGPA: 9.2**

GRE: 323 (Quant: 169; Verbal: 154; AWA: 4)

Schooling from Guru Harkrishan Public School, New Delhi, India; **12th: 90.8%, 10th: 10 CGPA**

PAPER PUBLISHED

- Conducted research on the role of popularity, skill, consistency and crowd judgment attributes in market value estimation of football players and published paper on *"Evaluating Factors Affecting Market Value of Football Players"* in 2018, which is under review
- The paper ascertained the impact of certain attributes on the market value of football players which was supported by statistical parameters like covariance and predicted the market value using machine learning algorithms justified by the higher accuracy as compared to the existing literature
- The initial set consisted of 32 parameters which narrowed down by covariance and domain intuition. Web-scraping was used to prepare the dataset

INTERNSHIP EXPERIENCE

- **Python Developer**
  Pricewaterhouse Coopers, Gurgaon **June – September 2018**
  - Involved as a Python developer to develop various utilities for automating the process of filing income tax returns of the clients; Utility set included XML generator from client's input file; The set also had questionnaire filing utility which extracted data from previous year's xml file; Utilities for organizing and migrating unstructured data for data analysis were also built
  - Applauded by Mr. Rahul Garg, Partner and National Direct Tax Leader at PwC India, for relieving the company of external vendors who used to be contracted prior to the development of these utilities and for achieving this mile-stone in a short span of 2 months
  - Worked with a team of chartered accountants and tax professionals as a part of Tax Technology Unit of PwC and had the opportunity of working with colleagues from completely different backgrounds while having a high degree of dependency on each other's tasks
  - Learned to apply theoretical concepts like Linear Algebra and Statistics in real life problems and honed my problem solving skills

  Technology: Python and its Libraries (Pandas, lxml, seaborn, openpyxl etc.); **Platform:** Django, MySql

- **Research Intern**
  Indian Institute of Technology (IIT), New Delhi **March – April 2018**
  Worked under Dr. R.K. Sharma, Professor of Mathematics where got the opportunity to apply theoretical knowledge thereby enhanced my Applied Research and Machine Learning skills by working closely with the experts in the domain; had to deploy machine learning solutions to the given problems and optimize those solutions for performance and scalability.
  Technology: Python and Machine Learning

- **Web Developer** **July – August 2017**
  FITNANO Technologies, New Delhi
  - Learned to work with minimal resources in a relatively unstructured team
  - Worked on the development of web-app that served as an interface of FITNANO's product: smart attendance system; the website rendered the data related to the smart i-card holder in tabular form. Created API for authentication of users of mobile application as well as web-app; designed complete frontend and integrated it with backend
  - Got the opportunity to present at IOT and Big Data workshops
  - Helped the startup to land POC deals by representing the technical team of FITNANO at meetings as well as startup fairs

  Technology: HTML, CSS, Javascript, Ajax, Python, Mysql database; **Platform:** Django

- **Web Developer** **June – August 2016**
  Jay Kay Cargo Services, New Delhi
  - Worked as a Web Developer and developed their website. Created a company portfolio website that also included backend form-handling that allowed potential customers to get price quotations based on the details they shared.
  - Provided smooth interface for non-technical personnel of the firm.
  - Responsible for all the enhancement activities.

Technology: HTML, CSS, Javascript, Ajax, Python, Mysql database; **Platform:** Django

ACADEMIC PROJECTS

- **Amazon Reviews Sentiment Analysis**
  - Analyzed the sentiment behind the Amazon products reviews using machine learning
  - Applied natural language processing using techniques like bag of words and word2vec
  - Used stemming, stop-words, lemmatization for text processing
  - Used t-SNE (t-distributed stochastic neighbor embedding) algorithm for dimensionality reduction and visualization as well as compared it with principal component analysis
  - Built ML models for quantifying the sentiment of the reviews
  - Compared different algorithms as well as the effect of concepts like n-grams and tf-idf weights in increasing the accuracies

  Technology: Python, Machine Learning

- **Classifying Phishing Websites**
  - Created an extension to detect Phishing websites by perusing the URL.
  - Categorized the features used for machine learning model into URL-based features, Domain-based features, Page-based features and Content-based features.
  - Analyzed a total of thirty parameters falling in the above mentioned categories and the irrelevant ones were discarded in the pre-processing.
  - Created an API was to compute the required parameters from processing the URL.
  - Used Decision tree algorithm for the classification task.

  Technology: Python, Machine Learning

- **Smart Home System**
  - Worked on optimizing power consumption in households, based on daily routine and habits of the residents, thereby reducing the electricity bills by using Statistical Machine Learning.
  - Developed an application that tracks real time parameters of the house. These parameters were used as base settings from which the optimized settings were calculated using probability, algebra, optimization techniques and the ML model.
  - Prepared Interface for the user to compare the recommended settings for the house appliances with the old settings and to see the units of energy saved by the recommended settings.
  - Presented the app in the Streethack hackathon by Ultrahack and it made it to the top 7 in which about 1000 entries participated.

  Technology: Python, Machine Learning, Android

- **Mall customers aggregation**
  - Found clusters and patterns among the customers of the mall
  - Classified the customer details and the products they purchased
  - Used the Natural language processing to process the items purchased
  - Classified the customer population into 4 categories based on their shopping patterns using machine learning.

  Technology: Python, Machine Learning

ACHIEVEMENTS

- Secured 96 percentile and was in top 4% in Joint Entrance Examination in 2015
- Secured top 5 college rank in all the semesters between 2015 and 2018
- Participated in the International Olympiad of English Language 2012 and ranked Firstwith State Rank as 237 in September 2012

TECHNICAL SKILLS AND CERTIFICATIONS

- Python for Data Science and Machine Learning Bootcamp by Jose Portilla from Udemy in 2018

- Django Python training using Python and Django Framework from Coding Blocks institute in 2017
- Certificate Course in Research Methodology (CCRM) from Alexis Foundation in 2017
- Crux (Algorithms and Analysis) from Coding Blocks in 2017
- Machine Learning: scikit-learn, NLTK, TensorFlow
- Data Science: pandas, matplotlib, seaborn, Jupyter Lab, openpyxl
- Programming: Python, Java, C, C++
- Web Development: Django, HTML, CSS, JavaScript, Twitter Bootstrap, AJAX

EXTRACURRICULAR ACTIVITIES

- Part of the organizing team in the TEDx event at GGSIPU, New Delhi in 2018
- Appointed as an Advisor and Video Editor of YouTube Channel of Bhangra4Fitness during 2018
- Member of school and college football team between 2013 and 2018
- Promoted donations for Kerala flood victims in college during 2018
- Member of Literary Society of Maharaja Agrasen, Gurgaon, during 2015-2018
- Volunteer at Leaders for Tomorrow- college society, during 2017
- Received certification in Emergency First Aid and CPR from Canadian Red Cross during 2017
- Active volunteer at the Anandashram NGO, Gurgaon, during 2015 till date