Sandeep Tiwari

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EDUCATION

University of Washington **March 2022**
(Incoming) Master of Science (MS) in Data Science

University of California, Berkeley **August 2019**
B.A. Data Science and Applied Mathematics

***Relevant Coursework*:** Fundamentals of Data Science, Discrete Math and Probability Theory, Data Structures, Introduction to Programming, Efficient Algorithms and Intractable Problems, Databases, Introduction to Artificial Intelligence, Applied Data Science with Venture Applications, Principles and Techniques of Data Science, Linear Algebra, Economic Statistics and Econometrics, Concepts in Cloud Computing (Coursera)

SKILLS

Technical: **Python, R, Java, SQL**, **MATLAB**, Stata, Markdown, Unix/Linux, HTML, CSS

WORK EXPERIENCE

Support Vectors | Fremont, CA **August 2019–*present***
Data Scientist

- Working on R&D projects that help extract actionable insights from data. This includes investigations into specific domains of knowledge, both extension of existing machine-learning algorithms to the specific domains as well as the creation of new methods necessary to investigate the domain data.

Rebis, Inc. | Palo Alto, CA **January 2019–August 2019**
Software Engineer

- Leveraged social media APIs (Facebook, Twitter, YouTube) to scrape user data, generating profiles of user interests within Rebis' platform
- Data was used to generate video recommendations based on user interests, through AI-driven mobile recommender system

Snipfeed | Berkeley, CA **September 2018–December 2018**
Software Engineer

- Developed recommendation algorithm for Snipfeed's news engine on various messaging applications

QT Ultrasound, LLC | Novato, CA **June 2018– August 2018**
Machine Learning Research Intern

- Employed unsupervised learning, deep learning, and computer vision in applied Generative Adversarial Networks to generate realistic ultrasound images, resulting in sharper imaging and more accurate detection of breast tumors. Currently have a patent pending on this technology.
- Used Pytorch and NVIDIA GPUs
- Also helped develop image segmentation algorithm—intended for tumor detection.

Berkeley Institute of Data Science | Berkeley, CA **January 2018–May 2018**
Undergraduate Researcher

- Processed articles using web app to describe interactions between police and protesters during Occupy movement. Data was used to find patterns of peace and violence which can shift behavior on both ends. The goal was to create an artificial intelligence engine that can understand dynamics and recommend most beneficial and peace-driven policies

Fujitsu Network Communications | Sunnyvale, CA **June 2017 –August 2017**
Software Engineering Intern

- Part of FNC's Tiger-HA team, developed a full-stack application for integration into Virtuora Network Controller, based upon logging various RPC calls and XML data for networks on scale of thousands of nodes.
- Used Python scripts and Flask framework to scrape key network events from backend logs to display onto custom-built user interface
- Introduced use of ElasticSearch in the network controller and integrated it into the UI
- Used Virtuora Network Controller, Elastic Search, Python, JavaScript, Flask, ExtJS, XML, JSON, RPCs and REST frameworks

PROJECTS

UW COVID Data Science Hackathon 2020 | Seattle, WA **June 2020**

- Won first place in the inaugural Data Science hackathon hosted by the MSDS program at UW in the data visualization/dashboard category
- Worked with remote team to generate visualizations that compare and analyze how COVID-19 has affected countries across the globe, and gain insights into how it is spreading, using Python and Tableau

Dynamic Time Series Algorithm for Predicting Long Term Energy Prices | Berkeley, CA **January 2018 – May 2018**

- Built time series model to predict energy price trends by evaluating risks in developing renewable energy infrastructure, emphasizing long-term accuracy and adaptability to significant economic events. Through multiple iterations of linear regression and ARIMA, created highly accurate price predictions.
- Input comprehensive dataset of energy prices over last 15 years with formulated auto-regressive integrated moving averages (ARIMA) model, with detailed features enabling adaptability and long-term prediction.
- Scraped and pre-processed unstructured government datasets, using Pandas and BeautifulSoup.

Inference and Capital Punishment | Berkeley, CA **February 2017**

- Investigated correlation between capital punishment and murder in the United States, using hypothesis testing, bootstrapping, etc.

LEADERSHIP AND EXTRACURRICULARS

Fundamentals of Data Science (Data 8) | Berkeley, CA **August 2017–December 2017**
Teaching Assistant / Undergraduate Student Instructor

- Taught fundamental data science concepts to class of 50 students over the course of a semester in Python. Concepts included hypothesis testing, p-value tests, confidence intervals, and bootstrap sampling
- Tutored undergraduate students in advanced math concepts outside of class, and assisted them with technical issues on homework assignments and projects

Sports Analytics Group at Berkeley | Berkeley, CA **February 2017–December 2017**
Data Analyst

- Used Python and R data analysis libraries to scrape, clean, and process large, unstructured sports data for various research studies