Sudip Pandey, PhD

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Data analyst/scientist with 4+ years of experience in analyzing big data of different US National Labs with a background in applied physics. Earned a certificate from University of California San Diego Data Science Boot Camp. Experienced in Python, Pandas, sciket-learn, data visualization tools such as JavaScript, Tableau, and D3.js., and both SQL and NoSQL databases (PostgreSQL, MongoDB, MySQL). Passionate about learning new things and techniques as well as employing knowledge and skills to yield solutions to various challenges. Enjoys leveraging background and skill set to support detailed and efficient analysis.

Technical Skills

Languages: Python, R, JavaScript, MATLAB, C, HTML5, SQL, NoSQL

Applications: GitHub, MongoDB, MySQL, PostgreSQL, GIT, Flask, Command Line, Tableau, KNIME, Power BI, Heroku

Tools: Excel, Pandas, NumPy, TabPy, Seaborn, Scikit learn, Keras, TensorFlow, Databasing, Jupyter Notebook, MSoffice, Origin, IgorPro, SasView

Projects

Housing price prediction | GitHub

Predict the housing price for each zip code or city in USA

- Role: Leader
- Tools: API, Python, NumPy, Seaborn, Matplotlib, Scikit learn, Jupyter Notebook, HTML5, CSS, Flask API, Bootstrap
- Best model is Random Forest Regressor which has a mean absolute error of around $27000.

US Agriculture | GitHub

The purpose of this project is to developed an interactive map and dashboard that contain various information about agriculture products across the USA

- Role: Leader
- Tools: HTML5, CSS, JS, Leaflet.js, JavaScript, Flask API, Bootstrap, python, pandas, pymongo, Jupyter Notebook, Census API, Weather API,

Salary Prediction | GitHub

Created a tool that estimates postdoc salaries to help them to negotiate their income when they get a job

- Role: Leader
- Tools: API, Python, NumPy, Seaborn, Matplotlib, Scikit learn, Jupyter Notebook, HTML5, CSS, Flask API, Bootstrap
- Best model is Support Vector Machine which has a mean absolute error of around $5000

Professional Experience

University of California, San Diego Feb. 2019 – present

Postdoctoral Scholar San Diego, CA

- Successfully analyzed neutron data from different US National Labs (Oak Ridge National Laboratory, NIST)
- Developing model for analyzing synchrotron x-ray data from different US National Labs (Argonne National Laboratory, Brookhaven National Lab, Berkeley National Lab)

Southern Illinois University Carbondale Oct. 2013 – Dec. 2018
Research Assistant Carbondale, IL

- Analyzed and published large data of magnetic materials at Low temperature solid state laboratory with Outstanding Dissertation Award
- Discovered perfect materials for magnetic refrigeration by analyzing large x-ray and magnetization data with Outstanding Master Thesis Award

Education

Certificate, Data Science: University of California San Diego, USA
A 24-week intensive program focused on gaining technical programming skills in Excel, VBA, Python, R, JavaScript, SQL Databases, Tableau, Big Data, and Machine Learning.

PhD in Applied Physics: Southern Illinois University Carbondale, IL USA. **2015 –2018**

MS in Physics: Southern Illinois University Carbondale, IL USA **2013 –2015**

MSc in Physics: Tribhuvan University, Kathmandu, Nepal **2009 –2012**

BSc in Physics (Major), Computer Science (Minor): St. Xavier's College, Nepal **2005 –2009**

Certification

Python Programming Certificate, UC San Diego, Machine Learning with Python, IBM, Machine Learning Scientist with Python, Data Camp

Honors and awards

- Outstanding Dissertation Award, Southern Illinois University, Carbondale (2020)
- Outstanding Master's Thesis Award, Southern Illinois University, Carbondale (2015)
- Doctoral Fellowship, Graduate School, Southern Illinois University, Carbondale (2017)
- Graduate School, Dissertation Research Award, SIUC (2018)
- Willis Swartz Award (2017)