

Sudip Pandey, Ph.D.

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Portfolio: [/SudipPandey](#) | LinkedIn: [/SudipPandey](#) | GitHub: [/SudipPandey](#)

Data analyst/scientist with a PhD in Applied Physics and a Certificate in Data Science from UC San Diego. Extensive experience in analyzing data of different US National Labs and utilizing modern analysis tools to make a positive impact for organizations. History of success with developing and deploying machine learning predictive models. Passionate about learning new things and techniques as well as employing skills to yield solutions to various challenges.

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, AWS, Databricks, Hadoop

Tools: Excel, VBA, Pandas, NumPy, SciPy, Seaborn, Scikit-Learn, Matplotlib, Seaborn, Keras, TensorFlow, Spark, Databasing, Web-Scraping, SQLAlchemy, Pymongo

Education

Certificate, Data Science: University of California San Diego, USA	2021 –2022
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

Projects

Respiratory HealthCare Tool | [GitHub](#) | [Website](#)

Developed a tool that predict risk of lung cancer and asthma emergency department visits using the air quality data.

- Role: Leader
- Tools: Python, Pandas, Scikit-learn, Classifications Models, Regression Models, HTML5, CSS, JavaScript, Flask API, Bootstrap, pyMongo, Jupyter, Air quality API, Heroku

Online Shopping Prediction | [GitHub](#) | [Website](#)

Built a model to predict whether a customer will buy the online product or not

- Role: Leader
- Tools: API, Python, Pandas, Scikit-Learn, Classification Models, Seaborn, Matplotlib, Scikit learn, Jupyter Notebook, HTML5, CSS, Flask API, Bootstrap, Heroku

Housing Price Prediction | [GitHub](#) | [Website](#)

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

- Role: Leader
- Tools: Python, Seaborn, Matplotlib, Pandas, Scikit-Learn, Classification Models, Jupyter Notebook, HTML5, CSS, Flask API, Bootstrap, Census API, Weather API, Heroku
- Best model is Random Forest Regressor which has a mean absolute error of around \$27000.

Credit Risk Evaluation | [GitHub](#) | [Website](#)

Predict whether a loan will become high risk or not.

- Role: Leader
- Tools: API, Python, Pandas, Scikit-Learn, Classification Models, Seaborn, Matplotlib, Scikit learn, Jupyter Notebook, HTML5, CSS, Flask API, Bootstrap, Heroku

Professional Experience

University of California, San Diego

Postdoctoral Scholar

Feb. 2019 – present

San Diego, CA

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

Southern Illinois University Carbondale

Research Assistant

Oct. 2013 – Dec. 2018

Carbondale, IL

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

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)