

Sudip Pandey, Ph.D.

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Data 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, C, R, JavaScript, MATLAB, HTML5, SQL, NoSQL

Applications: AWS, Hadoop, MongoDB, MySQL, PostgreSQL, Flask, Tableau, KNIME, Power BI, Heroku, GIT, Databricks

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

Education

Certificate, Data Science: University of California San Diego, USA	2021 –2022
PhD, Applied Physics: Southern Illinois University Carbondale, IL USA.	2015 –2019
MS, Physics: Southern Illinois University Carbondale, IL USA	2013 –2015
MSc, Physics: Tribhuvan University, Kathmandu, Nepal	2009 –2012
BSc, Physics (Major), Computer Science (Minor): St. Xavier's College, Nepal	2005 –2009

Projects

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

Developed a tool that predicts 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, trained, and deployed a model to predict whether a customer will buy the 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](#)

Deployed an interactive map to predict the accurate housing price for each city in USA using census data.

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

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, Matplotlib, Scikit learn, Jupyter Notebook, SQLAlchemy, HTML5, CSS, Flask API, Bootstrap, Heroku

Professional Experience

2U, Inc.

Feb. 2022 – present

Instructional Specialist (part-time)

- Support and engage with Bootcamp students teaching data science and visualization with Python, R, Pandas, HTML, JS, Scikit-Learn, Keras, TensorFlow, AWS, Hadoop, web scraping, Tableau, SQL, NoSQL, PyMongo, PostgreSQL, and Flask
- Follow the course syllabus, lesson plans, and all required instructional materials to guide students' learning.
- Support students' mastery of learning objectives in an effective and engaging manner.

University of California, San Diego

Feb. 2019 – present

Postdoctoral Scholar

San Diego, CA

- Developed a pipeline to analyze, visualize, and model the data during the experiment at different U.S national labs
- Successfully analyzed experimental 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

Oct. 2013 – Dec. 2018

Research Assistant

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
- Python Programmer, Data Camp
- Data Scientist with Python, Data Camp
- Machine Learning Scientist with Python, Data Camp
- AWS Machine Learning Certificate (In-progress)

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)