

# Sudip Pandey, Ph.D.

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Data analyst/scientist with 4+ years of experience in analyzing 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, Scikit-Learn, Tensorflow, data visualization tools such as JavaScript, Tableau, and D3.js., and both SQL and NoSQL databases (PostgreSQL, MongoDB). 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, AWS, Databricks, Hadoop

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

## Education

<b>Certificate, Data Science:</b> University of California San Diego, USA	<b>2021 –2022</b>
<b>PhD in Applied Physics:</b> Southern Illinois University Carbondale, IL USA.	<b>2015 –2018</b>
<b>MS in Physics:</b> Southern Illinois University Carbondale, IL USA	<b>2013 –2015</b>
<b>MSc in Physics:</b> Tribhuvan University, Kathmandu, Nepal	<b>2009 –2012</b>
<b>BSc in Physics (Major), Computer Science (Minor):</b> St. Xavier's College, Nepal	<b>2005 –2009</b>

## Projects

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

The purpose of this project is to develop 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, Classification Models, Regression Models, HTML5, CSS, JavaScript, Flask API, Bootstrap, pyMongo, Jupyter Notebook, 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
- Best model is Logistic Regression

### 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.

## 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)