

Kunal Khurana

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Kkhurana007/Data-Science-and-ML-projects/blob/main/README.md
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Professional Summary

Detail-oriented researcher with a background in statistical analysis, machine learning, and data science. Proficient in Python and modern data analysis tools. Fluent in English, French, Hindi, and Punjabi.

Pertinent Experience

RESEARCH ASSISTANT
McGILL UNIVERSITY

Montréal, CA
September 2022 – December 2023

- Conducted data analysis and research in the field of soil science, focusing on climate trends and agricultural crop yield prediction.
- Developed predictive models using machine learning techniques and collaborated with a multidisciplinary team.
- Managed and analyzed large datasets using Python.
- Oversaw field operations and coordinated daily activities for undergraduates.
- Collaborated on research field trials at McGill University near Montreal.

GRADUATE RESEARCH ASSISTANT
UNIVERSITÉ LAVAL

Québec, CA
January 2019 – August 2019

- Investigated the production of phenolics-rich biochar for controlling greenhouse gas emissions.
- Managed and analyzed wetland datasets using Python for Exploratory Data Analysis.
- Collaborated with a multidisciplinary team to optimize the production process, ensuring scalability and environmental sustainability.
- Utilized advanced statistical techniques to identify key patterns and trends within the wetland datasets, facilitating evidence-based recommendations.

RESEARCH FELLOW
PUNJAB AGRICULTURAL UNIVERSITY

Ludhiana, IN
October 2016 – March 2017

- Worked on statistical hypothesis testing using SPSS and automatized data processing and analyzing; conducted surveys for mapping.

Skills

- Data Science and Machine Learning:** NumPy, Pandas, SciPy, Scikit-learn, TensorFlow, PyTorch, linear regression, logistic regression, SVM, Random forest algorithm, k-means clustering, k-nearest neighbors, deep learning, neural networks
- Statistics and probability:** Probability distributions, Over and undersampling, Bayesian and frequentist statistics, Dimension reduction
- Data Visualization:** Matplotlib, Seaborn, Plotly, Power BI, Altair, Microsoft excel
- Database management:** SQL (PostgreSQL, MySQL), NoSQL, MongoDB
- Cloud Computing:** Git, Amazon Web Services, Microsoft Azure, Google Cloud
- Programming:** Python, SQL, SAS, Latex, Spark
- Other skills:** Problem solver, effective communicator, continuous learner

Education

GÉNIE ET SCIENCE APPLIQUÉES
CÉGEP DU VIEUX MONTRÉAL, CA

Montréal, CA
April 2021 – March 2022

Undertaken specialized courses in Applied Science, specifically designed and offered by the Ministry of Immigration of Québec for individuals who possess an intermediate to advanced level of proficiency in the French language.

FRANCISATION ET INTÉGRATION AU MILIEU QUÉBÉCOIS
UNIVERSITÉ LAVAL, CA

Québec, CA
November 2019 – January 2021

Successfully completed a series of four intensive French courses, spanning from beginner to intermediate levels, totaling over 1500 hours of rigorous classroom instruction.

MASTER'S IN SOIL SCIENCE
PUNJAB AGRICULTURAL UNIVERSITY

Ludhiana, IN
July 2013 – March 2016

Relevant Soil Science courses (like - Soil survey classification and mapping, Soil physical and biological environment, Analytical techniques in soils, plants, fertilizers and water, Soil physics, Soil chemistry, Soil mineralogy, genesis, classification and survey, Soil fertility and fertilizer use, Soil biology and biochemistry, etc.) along with water management (courses include- General meteorology and climatology, GIS and remote sensing for land and water resource management, Minor irrigation and command area management) as a minor subject. A research document entitled- "Effect of tillage, residue management practices and irrigation regimes on water transmission characteristics and maize (*Zea mays* L.) yield" was produced as a result.

BACHELOR'S IN AGRICULTURE
PUNJABI UNIVERSITY PATIALA

Patiala, IN
August 2009 – May 2013

Agriculture and allied courses with agronomy as an elective.