

# Mohal Khandelwal

Boulder, CO | mohal.khandelwal@colorado.edu | linkedin.com/in/mohalk/

Budding Machine Learning Engineer with 2 years of experience in all phases of the software development life cycle. Passionate about Data and Machine Learning technologies and the delivery of effective solutions through creative problem-solving.

## EDUCATION

### Master of Science - Data Science

University of Colorado Boulder

Aug 2022- May 2024

- **Courses:** Statistical Methods and Applications I and II, Machine Learning Algorithms, Data Mining, Data Structures and Algorithms, Ethical Issues and Cybersecurity in Data Science

### Bachelor of Engineering - Computer Engineering

Savitribai Phule Pune University

Aug 2016 - May 2020

- **Courses:** Data Structures & Analytics, Computer Networks, AI & Machine Learning, Data Warehousing, Software Modelling, Database Management Systems

## WORK EXPERIENCE

### Coursera - University of Colorado, Boulder

Course Facilitator

Colorado, USA

May 2023 - Present

- Managed and tutored 114 students for courses Introduction to Machine Learning-Supervised & Unsupervised, Introduction to Deep Learning and Deep Learning Applications for Computer Vision including holding discussion sessions and office hours.

### HSBC

Software Engineer

Pune, India

Sep 2020 - Aug 2022

- Onboarded 6 new document types in D-Crest (Optical Character Recognition and Language Translation suite) using image processing and Computer Vision techniques with the accuracy of above 90%
- Remodeled and added the new features in the documents that are already in production using CNN, and performed entity extraction using regex, widening the scope of documents by 150%
- Conceptualized and devised an automated testing tool for D-Crest using python, RESTful api, Tornado web framework, thereby minimizing the number of development defects in production
- Implemented handwritten signature detection system using YOLO model with 91% accuracy

### Spark Foundation Startup

Data Science Intern

Remote

June 2020 - Aug 2020

- Developed a student churn prediction model using logistic regression, decision tree algorithm, and Random Forest algorithm, which led to a 10% reduction in student churn rate.
- Developed data visualization tools and Dashboards using Python, SQL, and Tableau to communicate KPIs and insights and monitor business metrics for stakeholders.
- Presented findings and recommendations to senior management and stakeholders clearly and concisely.

## PROJECTS

### Text Analysis on Biomedical Literature | Text Mining, NLP

Research Project under Dr. S.Sonawane

- Implemented an interface using a web tool, PubTerm and created user defined categories to assist in analysis of medical records.
- Developed a pipeline within PubTerm by specifying queries with a list of identifiers to streamline the curation and annotation process of records based on genes, diseases and species.

### Retinopathy of Prematurity Detection | Python, Tensorflow

Independent Project

- Implemented CNN classification models using VGGNet to detect Retinopathy of prematurity in infants on a novel dataset to achieve an accuracy of 70%.

### Analysis of Post-Harvest Loss Across Africa | R, Statistical Analysis

Academic Project

- Created and analyzed 20+ EDA plots using Seaborn, PySpark, SQL on Databricks on survey data to identify which demographic variables correlate with less food loss.
- Conducted regression analysis to determine key post-harvest loss risk factors.

### Lane Detection System | Python, Tensorflow

Academic Project

- Developed a lane detection system from dashcam footage using color thresholding and Hough Line transformation.
- Annotated the detected lanes with green overlay and compiled into an output video showcasing it. Achieved accuracy of 70% on custom dataset

## SKILLS

**Languages:** Python, R, C++, Java, HTML/CSS, JavaScript, SQL

**Tools & Frameworks:** Tensorflow, Keras, OpenCV, Spark, Git, Tableau, Predictive Modelling, CI/CD, Statistical Modelling, Ansible, Jenkins, AWS, Docker, Pandas, Scikit-learn, Seaborn