

# Kshitij Pawar

213-691-2952 | [kshitijvijay271199@gmail.com](mailto:kshitijvijay271199@gmail.com) | [linkedin.com/in/kshitijpawar1](https://www.linkedin.com/in/kshitijpawar1) | [github.com/Kshitijpawar](https://github.com/Kshitijpawar)

## EDUCATION

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### University of Southern California

Master of Science in Computer Science

Los Angeles, CA

Aug 2023 – May 2025

### University of Mumbai

Bachelor of Engineering in Computer Engineering

Mumbai, MH

Aug 2017 – Jun 2021

## EXPERIENCE

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### Machine Learning Engineer

Tata Consultancy Services Research & Innovation Labs

Jun 2021 – Jul 2023

Mumbai, India

- Awarded On the Spot Award for streamlining object-detection pipeline with 93% accuracy for region-of-interest extraction from brochure images using TensorFlow, Python
- Mentored team of 5 undergraduate and doctorate interns, providing comprehensive support and offering research guidance, training and deploying machine learning models with on-premise GPU architecture
- Developed algorithm for title/heading extraction from scanned official documents with 80% accuracy and 25% lower inference time on edge devices using quantization

### Deep Learning Research Intern

Indian Institute of Tropical Meteorology

Jul 2020 – Apr 2021

Pune, India

- Innovated and implemented novel, customizable functions leveraging Python, Matplotlib, and Seaborn for visualizing mean of rainfall variables across the Indian subcontinent over a 30-year period, accounting for leap year conditions
- Spearheaded experiments involving spatial and temporal normalization in super-resolution models
- Pioneered research efforts for identification of correlation between diverse climate variables and rainfall

### Deep Learning Intern

Tata Consultancy Rapid Labs

Mar 2021 – Apr 2021

Mumbai, India

- Devised User attention measurement app with eye-line and directional data analysis using Flutter, Python
- Achieved 25% reduction in system resource consumption, enhancing user experience and device longevity

## PUBLICATIONS

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### Efficient Pothole Detection using Smartphone Sensors

Pawar K., Jagtap S. and Bhoir S.

ICACC 2020

- Developed and implemented an efficient pothole detection system using smartphone sensors (accelerometer and gyroscope) and neural networks to improve road safety, achieving a classification accuracy of 94.78%

## PROJECTS

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### Analyzing Community Opinion Dynamics using LLMs | *Python, PyTorch*

Jan 2024 – May 2024

- Created a mixed-method research framework to quantify changes in public opinion across ideological divides before and after landmark sociopolitical events
- Performed an innovative two-pronged analysis approach, combining traditional stance detection algorithms with Llama 3 fine-tuning techniques, to capture nuanced shifts in community opinions

### Collectibles mobile app for Control video-game | *Flutter, Python*

Feb 2023 – Mar 2023

- Devised a mobile app using Flutter for fans of video game Control, enabling users to view detailed collectible information directly from mobile devices
- Utilized Python with the Spyder web crawler to efficiently scrape collectible data from the Fandom website
- Created a user-friendly interface by adopting UI elements and aesthetics from original game

## TECHNICAL SKILLS

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

**Courses:** Coursera Deep Learning Specialization, Tensorflow in Practice Specialization, IBM Data Science Specialization

**Frameworks:** Flask, Django, Flutter, Tensorflow, Pytorch, ReactJS

**Libraries:** Spacy, Scrapy, Pandas, NumPy, Matplotlib, Xarray, Scikit-learn, openCV

## ACHIEVEMENTS

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Qualified for Codevita 2020 with rank 3502 out of 260k+ participants

Semi-finalist in AI Hackathon conducted by TCS (HumAIIn) among 30k+ participants