

# Pratik Mehta

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## EDUCATION

### University of Massachusetts Amherst

*Master of Science in Computer Science*

Amherst, MA

Aug 2016 – May 2019

### D. J. Sanghvi College of Engineering, University of Mumbai

*Bachelor of Engineering*

Mumbai, India

Aug 2011 – Jun 2015

## EXPERIENCE

### Consultant, Machine Learning & GenAI

*Deloitte Digital USI*

Nov 2020 – Jun 2024

Mumbai, India

- Successfully designed & developed REST APIs using FastAPI, PostgreSQL, and Llama served over AWS to answer user questions about live quantitative enterprise KPI data for Beta testing by a few thousand users
- Personally initiated driving deep changes to the in-house black-box testing practice for LLM-in-the-loop applications for use across clients
- Developed use-cases and AI-adoption strategies for AI-aspirant enterprise clients

### Research Engineer

*Indian Institute of Technology Bombay*

Aug. 2015 – Jul. 2016

Mumbai, India

- Trained and deployed phrase-based statistical machine translation systems for English-Marathi and English-Indonesian using medical-domain textbooks
- Designed an error analysis engine to identify and classify syntactic errors in translations, and developed a greedy algorithm for automatic post-editing, evaluated via BLEU scores and human evaluators

### Research Assistant

*Information Sciences Institute, University of Southern California*

June 2018 – Sept 2018

Waltham, MA

- Studied correlation between different evaluation metrics for machine-translation systems and their downstream impact on cross-lingual search applications

## PUBLICATIONS

**The IIT Bombay English-Hindi parallel corpus** | *LREC '18*

**The challenges of optimizing machine translation for low resource cross-language information retrieval**  
| *EMNLP '19*

**Investigating the potential of post-ordering SMT output to improve translation quality** | *ICON '15*

## PROJECTS

### Alfred: LLM powered dispatch of hyper-personalized notifications

| *Llama*

Jan 2024

- Conceptualized and developed a proof-of-concept system to track users' plain-language notification preferences and notify them based on live-data events in the application

### LegalEase: Cross-lingual semantic search engine

| *Cohere, Qdrant & lablab.ai*

Mar 2023

- Developed an application that answers questions factually based on lengthy legal documents (now called Retrieval Augmented Generation)
- Also developed a multi-lingual semantic search engine for any-language-query to any-language-document retrieval

## TECHNICAL SKILLS

**Languages:** Python, Rust, SQL (Postgres), HTML/CSS

**Frameworks:** FastAPI, gradio, streamlit, qdrant, pytorch

**Developer Tools:** Git, Docker, VS Code, RustRover

**Libraries:** pandas, NumPy, scikit-learn