

Vitthal Bhandari

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Education

University of Washington, Seattle, USA Expected Jul 2027
MS in Computational Linguistics

Birla Institute of Technology and Science Pilani, India Jul 2021
BE in Computer Science, Minor in Data Science

Skills

Languages: Python, JavaScript, TypeScript, C++, SQL

Technologies: Hugging Face, PyTorch, React, Next.js, Redux, Flask, Oracle SQL, Elasticsearch, Jenkins

Experience

American Express Mar 2023 – Oct 2025

Software Engineer II

- Developed a scalable, nested file storage platform (TypeScript, React, Zustand) for internal Amex legal tax documents, allowing 500+ enterprise users to view, upload, search through and share files securely
- Implemented a language translation feature using Hugging Face's MarianMT framework for translating chats between English and Spanish, improving communication for 50+ chatbot enterprise users
- Redesigned the Ask Finance chatbot UI using React and Redux to support graphics (images and tabular data) for 5K+ monthly user sessions, improving accessibility and enabling zoom-in capabilities
- Created an automatic dependency manager (Next.js, Sanic, TypeScript) to highlight and resolve package conflicts and vulnerabilities in Node and Python projects (Presented at Amex's global hackathons: GrowthHack 2023, DevCon 2024)

Standard Chartered Bank Jul 2021 – Feb 2023

Software Engineer I

- Led team of 4 in developing an API management framework (TypeScript, React, Flask) for creating configurable APIs (1.3K+ APIs) to fetch/add/update data from Oracle SQL and Dremio, reducing API deployment time from 48 hours to 2 minutes
- Built reusable UI components (JavaScript, React, Redux) and REST APIs (Flask) for the in-house chatbot Maya, improving the look and flow, while enhancing its capability to analyze data with speed and scale

PayPal Jan 2021 – Jul 2021

Software Engineer Intern

- Created PayPal's DropZone platform's 1st real-time metrics dashboard (JavaScript, React, Google Charts) and created REST APIs (Spring Boot, Elasticsearch), indexing >2M file transfers/hour leading to its global adoption

Standard Chartered Bank May 2020 – Jul 2020

Software Engineer Intern

- Built a recommendation engine using React and Flask over a set of 100K+ transactional records
- Leveraged Elasticsearch to index records and created REST APIs, performing nested search queries in <2s

Projects

Analyzing Hate Speech in Popular Political Podcasts [GitHub Repo](#)

- Transcribed over 3k podcast episodes using Whisper based on a set of carefully curated 90 hateful keywords related to gender and gender identity
- Manually annotated randomized 30 transcripts for hate on the basis of a modular definition of hate
- Finetuned pre-trained language models (DistilBERT, DeBERTa, HateBERT) on an implicit hate speech dataset, and evaluated their performance on the podcast transcriptions

Detecting Homophobia and Transphobia in YouTube Comments [GitHub Repo / Paper](#)

- Fine-tuned BERT-based pretrained language models using the transformers library at a hackathon organized at the LT-EDI Workshop
- Implemented easy-data-augmentation (EDA) to tackle class imbalance and achieved ranks 3/6/9 on the code-mixed/Tamil/English datasets with macro-averaged F1 scores of 0.54/0.72/0.46

Publications

[Google Scholar Link](#)

- [1] **On the Challenges of Building Datasets for Hate Speech Detection**

[arXiv Preprint](#)

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- [2] **bitsa_nlp@LT-EDI-ACL2022: Leveraging Pretrained Language Models for Detecting Homophobia and Transphobia in Social Media Comments**

[ACL 2022](#)

Vitthal Bhandari and Poonam Goyal

The Second Workshop on Language Technology for Equality, Diversity and Inclusion

Achievements

1 of 50 attendees selected for the Advanced Language Processing Winter School (ALPS 2024) in Grenoble, France