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

[1] **On the Challenges of Building Datasets for Hate Speech Detection** **arXiv Preprint**
Vitthal Bhandari

[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