# Pranav **A**

CV AND NLP RESEARCH SCIENTIST AND ENGINEER

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*Experienced data scientist who has published in top tier competitive conferences in NLP.*
*Highly proficient in deep learning (Pytorch) and well familiar with NLP as a research field.*
*Implemented many data science projects in various startups.*
*Lead D&I programs in volunteer based organizations.*

## **Exp**erience

### Miro AI
*Hong Kong*

SENIOR DATA SCIENTIST
*Jan 2021 - Present*

- Implemented highly efficient Bib detectors for cycling and running races
- Implemented deep learning based classifiers for demographic attributes like age and gender.
- Implemented similarity search based algorithms for roster identification
- Developed novel algorithms for unsupervised clustering and fast string matching

### Sentinel AI
*Estonia*

NLP RESEARCHER
*Jul 2020 - Dec 2020*

- Developed novel algorithms for evidence retrieval for news fact-checking.
- Implemented algorithms on multi-modal fact checking, especially on ASR and videos.
- Developed algorithms for deepfake classifiers with explainability on image manipulation

### Dayta AI
*Hong Kong*

MACHINE LEARNING LEAD
*Jul 2017 - Jul 2020*

- Implemented highly efficient systems on person re-identification and detection for videos.
- Implemented deep learning based classifiers for demographic attributes like age and gender.
- Developed question answering systems for Traditional Chinese based text corpora.
- Developed script conversion methods for conversions between Traditional Chinese and Simplified Chinese.
- Developed paraphrasing systems for Traditional Chinese based news texts

## **Edu**cation

### Hong Kong University of Science and Technology
*Hong Kong*

MASTERS IN BIG DATA TECHNOLOGY
*Sep. 2017 - Sep. 2018*

- Awarded entrance scholarship for top performance.
- Top 15% of the class. *Detailed list of exams and projects are available here (Link)*

### VIT University
*India*

BACHELORS IN COMPUTER SCIENCE AND ENGINEERING
*Sep. 2013 - Sep. 2017*

- Consistently awarded high performing awards in academics
- THESIS: Exploration of Heuristics in IR in Applications of Approximate String Similarity (Link)

## **Vol**unteer Experience and D&I advocacy

### NAACL 2021

SENIOR D&I CHAIR

- Highly prestigious position in a top-tier NLP conference
- Implemented several D&I measures including finanical access, D&I awareness programs, established forums for research and affinity group socials, worked on increasing accessibility for conferences.
- Coordinated and helped in organizing various affinity groups including Black in AI, Queer in AI, Masakhane and North Africans in NLP.

### Queer in AI

CORE ORGANIZER

- Working on D&I and safety initiatives
- Helped in organizing many socials in top-tier conferences for facilitating in discussions and cohort forming

**SIGTYP**

Core Member

- Editor of SIGTYP newsletter, which summarizes latest research in multilinguality and typology.
- Host of SIGTYP lecture series and fall SIGTYP workshop

# **Not**able Projects and Publications

Check out my github repository *pranav-ust* for more projects and resources.

### 2kenize: Tying Subword Sequences for Chinese Script Conversion

arXiv Link, published in ACL 2020

- First authored paper published in extremely competitive top-tier NLP conference, ACL 2020
- Work done on increasing accessibility to Traditional Chinese and HongKongese.
- Developed script conversion methods for converting between Chinese scripts.
- Developed state of the art classifiers for topic classification in Chinese NLP.

### Making Conferences Queer Friendly

Link, work published with Queer in AI

- Work to appear in Widening NLP 2021
- Outlining best practices for making conferences queer-friendly, which include inclusive designs of registration forms and virtual spaces, strengthening queer diversity and developing trans-inclusive publication workflow.

### Bit Partitioning Schemes for Multicell Zero-Forcing Coordinated Beamforming

arXiv Link, published in ICIIS 2017

- Awarded best undergrad paper
- Optimization methods developed for bit partitioning in network cells.

### Inflo: News Categorization and Keyphrase Extraction in an Aggregation System

arXiv Link

- Automatic keyphrase extraction and topic classification for news articles. Developed novel algorithms for implementation.

### Exploration of Proximity Heuristics in Length Normalization

arXiv Link

- Exploring heuristics such as length similarity for retrieval systems.

### BREAK, MAKE and TAKE: An Information Retrieval Approach

arXiv Link

- Work based off undergrad thesis.
- Work on fast string retrieval methods using subword tokenization and graphical similarity.

### Alignment Analysis of Sequential Segmentation of Lexicons

Publication Link

- Work based off undergrad thesis.
- Retrieving similar cognates in cross lingual applications using subword tokenization and graph similarity
- Published in ACL-SRW 2018

### Keyword Extraction and Classification in Scientific Documents

Repository Link

- Usage of SciBERT to identify keyword boundaries and classify them onto scientific terminologies.

### Security Analysis of Bitcoin Transactions through Statistical Graph Annotation

Repository Link

- Work done for Blockchain course in HKUST
- Developed transaction parsing algorithms. This is used for fraud detection using graphical flow methods.

# Skills

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|---|---|
| **Proficient in** | Python, LaTeX, Pytorch, Bash Scripting |
| **Familiar with** | R, Tensorflow, MySQL, C++, PySpark |
| **Research Interests** | Natural Language Processing, Ethics in AI, Computer Vision |

# Awards

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| 2020 | **Finacial Award**, ACL 2020 scholarship for research presentation |
| 2019 | **Finacial Award**, NAACL 2019 scholarship for research presentation |
| 2018 | **Finacial Award and Travel Grants**, ACL 2018 scholarship for research presentation |
| 2017 | **Entrance Scholarship**, HKUST, for outstanding academic performance |
| 2017 | **Best Undergrad Paper**, ICIIS for outstanding undergrad presentation |
| 2017 | **Best Thesis Award**, VIT University, for outstanding thesis |
| 2013-17 | **High GPA awards**, VIT University, for outstanding academic performance |

# Program Committees

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| 2021 | **Journal Reviewer**, Computer Speech and Language |
| 2020 | **Session Chair**, AACL Student Research Workshop 2020 |
| 2020 | **Event Organizer at COLING**, D&I in NLP |
| 2020 | **Mentor**, Widening NLP 2020 |
| 2019 | **Reviewer**, NAACL Student Workshop 2019 |
| 2020 | **Reviewer**, AACL Student Workshop 2020 |
| 2019 | **Reviewer**, ACL Student Workshop 2019 |