

# Neel Bhandari

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## EDUCATION

### Carnegie Mellon University

*Masters in Intelligent Information Systems*

Pittsburgh, PA

*Dec. 2025*

### R.V. College of Engineering

*B.Tech in Computer Science and Engineering, GPA: 8.63/10*

Bangalore, India

*Sept. 2022*

## PUBLICATIONS

- **Aya Model: An Instruction Finetuned Open-Access Multilingual Language Model - Best Paper at ACL 2024.**
- Neel Bhandari, Pin-Yu Chen. **Lost In Translation: Generating Adversarial Examples Robust to Round-Trip Translation (Full Paper)**, *ICASSP 2023*.
- Neel Bhandari, Pin-Yu Chen. **Lost In Translation: Generating Adversarial Examples Robust to Round-Trip Translation**, *Workshop on Socially Responsible Machine Learning, ICLR, 2022*.
- Sankalp Gilda, Neel Bhandari, Wendy Mak, Andrea Pannazi. **Robust Calibration For Improved Weather Prediction Under Distributional Shift**, *Bayesian Deep Learning Workshop, NeurIPS 2021*.

## RESEARCH PROJECTS

### Member of Core Research Team

*Aya Open Science Project, Cohere For AI Community*

January 2023 - April 2024

*Remote*

- Won the Best Paper Award at ACL 2024
- Led experiments on quality estimation and pruning of multilingual datasets to understand the impact of data quality on model performance.
- Spearheaded the development of the data processing pipeline for diverse multilingual datasets, reducing the caching time from several days down to hours.

### External Research Student

*MIT-IBM Watson AI Lab*

June 2021 - March 2022

*Remote*

- Collaborated with Dr. Pin-Yu Chen on studying the robustness of text-based adversarial attacks from a multilingual lens.

### Research Intern

*Indian Space Research Organisation*

August 2020 – June 2021

*Bangalore, KA*

- Led the development of an end-to-end, high-accuracy pipeline for unsupervised semantic segmentation of multi-spectral satellite images aimed at identifying illegal encroachment into protected areas in Bangalore.
- Developed a scalable Conditional Generative Adversarial Network (GAN), significantly lowering the satellite data acquisition and processing cost for ISRO.

## WORK EXPERIENCE

### Machine Learning Scientist

*PayPal Inc.*

Aug 2022- July 2024

*Bangalore, India*

- Spearheaded the research and development behind the first automated Root Cause Identification tool at PayPal, which promises to reduce root cause analysis time by over 75%
- Actively trained and fine-tuned language models, engineered their deployment and developed domain-specific evaluation methods.
- Currently focused on integrating LLMs into critical user-facing products at PayPal.

### Machine Learning Intern

*PayPal Inc.*

April 2022 - July 2022

*Bangalore, India*

- Developed a proof-of-concept Root Cause Identification tool focused on the automated extraction of problem statements and root causes from unstructured chat transcripts.

## SUMMER SCHOOLS

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- **Mediterranean Machine Learning Summer School 2023:** Received a fully funded travel and accommodation scholarship for being one of the Top 10 selected applicants out of 800 applications. I was also selected to present a poster at the school.
- **Oxford ML Summer School 2023:** Selected for the highly competitive OxML Summer School. Attended the online version of the school.

## PROJECTS

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- Interpretable Question Answering for Privacy Policies.** | *Python, Tensorflow, Streamlit* Feb. – May 2021
- Developed a Question Answering system for Privacy Policies using Deep Learning.
  - Integrating optionality for analysing output through interpretability methods including saliency maps and perturbation analysis
- Analysing the Impact of Covid-19 on Food Security** | *Python, Tensorflow* June 2020 – Aug. 2020
- Declared Winners out of 4000 teams and 10,000 students at **IBM Hack Challenge 2020**, one of India's largest hackathons.
  - Analysed and Predicted the Food Security situation for India and the U.S. using Multivariate Regression and Time Series Analysis.
  - Used K-Means clustering to identify and comprehensively review vulnerable populations and display the required details on an interactive, dynamic dashboard.
- News Media Bias Detection System** | *Python, PostgreSQL, MongoDB, Flask* Oct. 2020 – Nov. 2020
- Developed a fine-tuned BERT model for multi-classification of political bias on news articles, resulting in an F1 score of 0.972.
  - Provided secondary features such as summarising articles, article metadata, and subjectivity and polarity of the article.
  - Integrating NoSQL and SQL for storage of training data as well as resulting metadata for dynamic presentation on our user-friendly UI.

## HONORS AND AWARDS

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- Received a fully-funded scholarship to attend the **Mediterranean Machine Learning Summer School 2023**
  - Top 10 applicants out of 800 applications to the summer school.
- Winner of the **IBM Hack Challenge 2020**, consisting of 4000 teams and 10,000 participants.
- Winner of the National Law School Debate (Indian National Debate Championship), Bangalore.
  - Touted to be India's largest institutional debate tournament..
- Champion of the Middle East and Asia Phase of the BDIDF Global Debating Championship.
  - Felicitated by the President of Bangladesh for this accomplishment..

## TEAM AND VOLUNTEER EXPERIENCE

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| <b>Organizer, Cohere For A.I.</b><br><i>Organizing the Interactive Reading Group at Cohere For AI</i>   | Remote<br><i>July 2022 - Present</i>               |
| <b>Member and Vice President, R.V. Debating Society</b><br><i>Coach students on several topics such as parliamentary debating, economics, and politics.</i> | Karnataka, India<br><i>July 2018 - August 2022</i> |
| <b>Fundraising Executive at S.P.A.R.K</b><br><i>Organized a fundraising campaign for Rs. 2 million for orphanages affected by the pandemic</i>              | Karnataka, India<br><i>Jan 2020 - March 2021</i>   |
| <b>Curriculum Content Developer at Gyanada</b><br><i>Developed an introduction to programming curriculum for underprivileged children</i>                   | Karnataka, India<br><i>March 2021 - April 2021</i> |