NEEL BHANDARI

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EDUCATION

Carnegie Mellon University   Pittsburgh, PA
M.S. in Machine Learning and NLP (MIIS), LTI - Current GPA: 3.96   *Aug. 2024 - Dec. 2025*
Coursework: Advanced NLP, On-Device Machine Learning, Multimodal ML, Safety and Social Impact in LLMs
R.V. College of Engineering   Bangalore, India
B.Tech in Computer Science and Engineering - GPA: 8.63   *Aug. 2018-Sept. 2022*

SELECTED PUBLICATIONS

1. **Neel Bhandari**[*], Tianyu Cao[*], et al. *Out of Style: RAG's Fragility to Linguistic Variation*, **Under Review – COLM 2025**

2. Ahmet Üstün, Viraat Aryabumi, **Neel Bhandari**, et al. *Aya Model: An Instruction Finetuned Open-Access Multilingual Language Model*, **ACL 2024 – Best Paper Award**

3. **Neel Bhandari**[*], Pin-Yu Chen. *Lost In Translation: Generating Adversarial Examples Robust to Round-Trip Translation*, **ICASSP 2023**

WORK EXPERIENCE

Adobe   May 2025 – August 2025
Machine Learning Intern   *San Jose, CA*
- Spearheading the development of an agentic framework for Adobe GenStudio, enabling flexible and modular workflows for performance marketing through autonomous agents capable of research, marketing content generation, and user personalisation and brand-specific guideline compliance.
- Designing reinforcement learning methods for creative content generation, incorporating verifiable reward modeling and exploratory strategies to support novel generation capabilities.
- Developing control techniques that steer language-model outputs to follow in-context user-defined guidelines.

PayPal   Aug 2022- July 2024
Machine Learning Scientist   *Bangalore, India*
- Spearheaded the research and development of PayPal's first automated Root Cause Identification tool, reducing root cause analysis time by over **75%**.
- Trained and evaluated proprietary language models for PayPal's first LLM-based Assistant chatbot, integrating use-case–specific metrics.
- Led fine-tuning and prompt engineering experiments to build a personalized support feature that resolves account-specific customer queries at scale.

PayPal   April 2022 - July 2022
Machine Learning Intern   *Bangalore, India*
- Built a PoC tool to automatically extract root causes from unstructured chat transcripts, streamlining incident diagnosis and reducing manual effort.

RESEARCH PROJECTS

Modelling Human–AI Dynamics in High-Stakes Social Interactions   Jan 2025 - Present
Graduate Research Student, Advised by Prof. Maarten Sap   *Pittsburgh, PA*
- Designing and engineering large-scale agentic simulation systems to study how AI agent traits and human personality shape negotiation outcomes and social alignment in high-stakes, non-cooperative scenarios.
- Developing automated evaluation pipelines and leading a human-participant study to assess the behavioral fidelity of AI agents as Human-Digital Twins in simulating human decision-making and negotiation strategies

Aya Open Science Project [2]   Jan. 2023 - April 2024
Member of Core Research Team, Cohere For AI Community   *Remote*
- Led experimentation and design on quality estimation and human-led pruning of multilingual datasets to understand the impact of data quality on model performance.
- Engineered the development of the data processing pipeline for diverse multilingual datasets, reducing the caching time from several days down to hours.

SKILLS

- **Programming Languages & Libraries**: Python; C++; SQL; NumPy; Pandas; PyTorch; Tensorflow; Scikit-learn