Rishab Mallick

rishab.page

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Experience

- **Unify (YC W23)**
  Machine Learning Engineer — May 2023 – Current
  - **AI Bench**: Designed methodology & implemented runtime performance benchmarking with CI/CD infra on GCP.
  - **Model Hub**: Created LLM provider router supporting Perplexity, Replicate, OpenAI, Anyscale, Vertex AI etc.
  - **Ivy Framework**: Integrated Ivy into OSS repos - BentoML, Seldon-Core, Seldon-MLServer, MMPretrain. Added new functions, reviewed PRs, ensuring code quality and compliance with standards.
  - **Transpiler**: Remodeled source code generation logic to comply with torch.fx convention for easier debugging. Researched TPU support for transpilation & framework-agnostic (PyTorch, Jax, TensorFlow) profiler.
  - **Enterprise Demos Lead**: Collaborated with the Head of Operations on sales calls and market research for future product direction. Managed cross-functional teams, oversaw development, and defined demo objectives, ensuring alignment with organizational goals. Executed public demos showcasing value prop - XGBoost, MMPretrain.
- **Small Joys**
  Founding AI Engineer — Nov 2021 – Aug 2023
  - **Inclusive AI**: Addressed unintended bias in NLP, enhancing model robustness against adversarial text, surpassing Google and AWS sentiment analysis on internal datasets. Deployed inference API on AWS.
  - **Health**: Pilot project for predicting behavioral health from therapy sessions through multiple modalities.
  - **Therapist Dashboard Insights**: Easy-to-digest information for therapists from user journals using an ensemble of modules. R&D on Themes and Journal Abstraction AI modules.
  - **ScreenerOMR**: Constructed a Python package for extracting pertinent data from scanned medical screeners.
  - **Annotation Framework**: Implemented annotator cohorts of 10, and devised labeling process for golden data. Wrote classification data augmentation with GPT-3.
- **Google Summer of Code**
  Student Software Developer — Jun 2021 – Aug 2021
  - **GenomicInfo**: Engineered a framework for rapid genomic data extraction from C. Elegans papers for WormBase, employing a hybrid method of regular expressions, term dictionaries, and BERT NER.
  - **Impact**: Cut manual biocuration time from hours to minutes, while uncovering overlooked data from older papers. Published Accelerated variant curation from scientific literature using biomedical text mining in microPublication Biology with Valerio Arnaboldi, Paul Davis, Stavros Diamantakis, Magdalena Zarowiecki, and Kevin Howe.
- **Centre for Development of Advanced Computing**
  Research Intern — Apr 2021 – Jun 2021
  - **Masked Face Recognition**: Crafted a facial recognition system compatible with masks for law enforcement authorities, tailored for low-end devices in collaboration with the image processing team.
- **Myraa Technologies**
  AI Solutions Intern — Sep 2020 – Mar 2021
  - **Detection**: Developed custom object detection for low-end wearable devices in manufacturing - TFLite, Android.
  - **e-Proctor**: Built online exam e-proctor with facial recognition and features tracking, and gadget detection.
  - **CADAnalyzer**: Programmed engineering drawing comparison tool for universities.
  - **Explorative POCs**: Car damage diagnosis system on low data, & usage of privacy-preserving DL with PySyft.

Awards

- **Dr. APJ Abdul Kalam IGNITE Award** | *National Innovation Foundation - India* — November 2015
  - Received IGNITE 2015 award by the former President of India, Pranab Mukherjee, for the idea 'Pay as you weigh' - one of 31 innovations selected from 28,106 submissions across India. Patent ID: 1189/KOL/2015
- **Regional Winner of ZooHackathon** | *WWF* — November 2019
  - Awarded for engineering best solution to curb wildlife trafficking among 12 other finalists.

Education

- **St. Thomas' College of Engineering and Technology** — India
  Bachelor of Technology in Computer Science & Engineering, GPA: 8.84 — 2018 – 2022