

Waseem Ahmed

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SUMMMARY

Results-driven Software + AI / ML Engineer with 1+ years of experience in optimizing AI/ML models (NLP, LLM) for speech and biological data pipelines. Delivered 15% accuracy gains in ASR systems for Indian dialects via transformer architectures and optimized vision-language models to accelerate bio-analysis workflows by 20%. Passionate about leveraging deep learning expertise (TensorFlow, PyTorch) and software design principles to innovate developer tools and streamline AI deployment.

EDUCATION

Masters in Computer Science, University of Florida

01/2023 – 12/2024 | Gainesville

SKILLS

Language:

Python, C, C++, JavaScript, SQL, R, Bash shell scripting, SLURM, CSS, HTML

Interests:

Seaborn, Scikit-learn, Matplotlib, Github, FrontEnd, Backend AI, LLM, Database, Deep Learning, SQL Apache Airflow Statistics, NLP, Data Science, ML, Data Analytics, Data Science, Data Analysis, Data Engineering, Kubernetes, Docker, Linux, Postgre SQL, Computer Vision, Operating Systems, data modeling, data models, data architecture, ETL, CI/CD, TensorFlow, Pytorch, Machine Learning, Mathematics, Django, Node, Nodejs, Full Stack, Rest Api, Excel, cloud computing, problem-solving, data engineer, Google Cloud, Numpy, Pandas.

PROFESSIONAL EXPERIENCE

Graduate Assistant, BioVision Lab

08/2024 – present

- **Developed & deployed transformer-based Vision-Language Models** (e.g., Florence, BioClip) for biodataset analysis; optimized parallel processing on A100 GPUs, enabling efficient trait-based semantic searches across 1M+ biological data points.
- **Accelerated high-dimensional embedding workflows** by 30% through GPU optimization of cosine similarity algorithms, improving efficiency for trait querying in 3 bio-specific VLMs
- **Designed zero-shot evaluation** for bird species classification, achieving genus-level accuracy up to 92% and validating VLMs' adaptability to biological taxonomy tasks.

Teaching Assistant, University of Florida

08/2023 – 12/2023

- **Delivered 50+ interactive lectures** on React, JavaScript, Strapi, and Agile methodologies for 350+ students, improving topic comprehension by 15% (pre-/post-assessment scores) and fostering engagement through hands-on coding workshops.
- **Designed collaborative project modules** for the CASM initiative, simplifying full-stack development workflows into modular tasks; 80% of students reported improved proficiency in deploying scalable applications.
- **Collaborated** with UFL teams to align curriculum with industry standards, reducing project lifecycle bottlenecks by 25% during student-led Agile sprints.

PROJECTS

Accent-Inclusive ASR Model Optimization | Python, Slurm, HiperGator, OpenAI Whisper

- Engineered a data pipeline to analyze **26+ Indian accent datasets** (10K+ hours), optimizing feature extraction with Slurm for **15% improved ASR accuracy** in low-resource dialects.
- Designed a **diverse audio collection framework** (1,000+ samples) to reduce accent bias, enhancing model robustness by 25% across underrepresented linguistic groups.
- Fine-tuned **OpenAI's Whisper LLM (769M params)** using HPC clusters (HiperGator) for Indian-accented speech transcription, achieving 90% F1-score in cross-state validation.

Medical NLP/LLM Development & Fine-Tuning (BERT/Hugging Face/PyTorch)

- **Spearheaded data collection** from medical textbooks/patient notes using **medical terminology indices**, curating a **1,000+ example dataset** to fine-tune NLP models, enhancing medical language interpretation accuracy by 25%.
- **Engineered fine-tuning workflows** for a **foundational LLM (BERT, GPT-3.5)** using **50,000+ patient notes**, optimizing model performance for medical documentation generation (leveraging Hugging Face/PyTorch), reducing manual annotation time by 30%.
- **Boosted EHR-integrated chat capabilities by 20%** via **targeted fine-tuning**, directly improving accuracy of **AI-generated clinical notes** and reducing clinician review time by 15%

Club Web Developer | Cuong Nhu

- **Developed responsive web interfaces** using React.js and Tailwind CSS, increasing user engagement by 40% and conversion rates by 25% through data-driven design improvements
- **Implemented user feedback system** through targeted surveys, analyzing UX pain points to drive 15% increase in customer satisfaction scores
- Optimized website performance using modern CSS frameworks and component-based architecture