Kranthi Kiran GV

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Education

New York University — Courant Institute of Mathematical Sciences — New York, NY
Master of Science in Computer Science — GPA: 3.75/4.0 — *Sep 2021-Present*

National Institute of Technology Warangal — Warangal, India
Bachelor of Technology in Computer Science & Engineering— 8.11/10.0 (First class with distinction) — *May 2018*

Selected Coursework: Computer Vision, Natural Language Processing with Representation Learning, Machine Learning, Natural Language Understanding, Fundamental algorithms and Realtime and Big Data Analytics

Technical Skills

Languages: C / C++, Python, SQL, Javascript, Objective-C, Swift, Java
Frameworks: Apache MapReduce, Apache Hive, Node.js, Kubernetes
Libraries and Tools: NumPy, Matplotlib, Pandas, PyTorch, TensorFlow, Git, Docker, Jupyter, Azure

Experience

New York University — Center for Data Science — New York, NY
Research Assistant, Advisor: Prof Krzysztof J. Geras — *Jan 2022 - Present*

- Developing a multi-modal breast cancer detection model based on mammography and ultrasound data.
- Designed a system to extract structured information from 1,400+ breast cancer pathology reports, achieving an entity F1-score of 0.916 and outperforming a strong BERT baseline (0.843).
- Curated and processed a pathology dataset for named entity recognition tasks, encompassing more than 1,400 reports, and managed Label Studio for expert annotator labeling and quality control.

Microsoft India R&D Private Limited — Hyderabad, India
Software Engineer 2 (Technical lead) — *June 2018 – August 2021*

- Led a team of three engineers in developing and shipping PDF experiences for the Office iOS application. Played a key role in v1 release that eventually had over 160 million active devices and a 4.8-star rating on the App Store.
- Developed and integrated key features from day zero such as PDF viewing, editing, cloud file support and merge/extract PDFs.
- Designed and implemented a robust cache system for media upload to cloud, ensuring stability and scalability for future features.
- Owned the Intune area (mobile application management) for Office iOS application. Helped on-board several features into compliance. Worked with enterprise customers on several high impact data leaks and fixed them.
- Served as an open-source champion for the Office team, reviewing and providing guidance on 10+ projects for open-source release readiness and helping them leverage open source effectively

National Institute of Technology Warangal — Warangal, India
Undergraduate research — *Mar 2018 – Dec 2018*

- Proposed a ResNet based segmentation-free classification method for whole slide images of cervical cell clusters with an accuracy of 96.37% on SIPakMeD dataset.
- Explored the features (such as the size of perinuclear cavity, cytoplasm and nucleus) learnt by the network by applying PCA on the penultimate layer of the network and explored visual saliency using Grad-CAM.
- Analyzed the performance of the network on unbalanced datasets through metrics like F-score, Sensitivity, Specificity and H-mean in comparison to previous baselines (AlexNet, VGG-16, DeepPap).

Indian Institute of Science — Computational Intelligence Lab — Bangalore, India
Research Assistant, Advisor: Prof S.N Omkar and Dr. Amarjot Singh — *May 2017 - July 2017*

- Proposed a real-time aerial pose estimation and person identification system using ScatterNet based deep neural network based on Part Affinity Fields.
- Designed protocols and executed the collection of real-world data from the drones and annotation of the data collected from various heights.
- Media coverage: Featured in Discovery Seeker and Digital Trends.

Peer-reviewed Publications

- Real-Time Aerial Suspicious Analysis (ASANA) System for the Identification and Re-Identification of Suspicious Individuals using the Bayesian ScatterNet Hybrid (BSH) Network. Singh, A., Patil, D., **GV, Kranthi Kiran** and Singh, A. and Harsh, O. and Kumar, R. and Singh R., and Vamsi S **ICCV Workshops 2019** [Link]
- Automatic Classification of Whole Slide Pap Smear Images Using CNN With PCA Based Feature Interpretation. **GV, Kranthi Kiran**** and Meghana Reddy, G**. **CVPR Workshops 2019** (** indicates equal contribution) [Link]