KSHITEESH HEGDE

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PROFESSIONAL SUMMARY

I am a seasoned ML Scientist with 5+ years of experience and a proven track record of tackling impactful and challenging research and engineering problems. I thrive in dynamic roles that merge research and application of cutting-edge ML techniques, driving tangible business impact through innovation.

WORK EXPERIENCE

Machine Learning Scientist, Western Digital, San Jose, CA   Jul 2018 – Present

- Developed production-quality machine learning models using scikit-learn that proactively identify hard disk drive (HDD) failures, resulting in a **10.1%** reduction in operational expenditure (OpEx)
- Developed deep learning object detection and segmentation models using PyTorch to detect anomalies in scanning electron microscope (SEM) images of HDD components, used by **1008** subject-matter experts (SMEs)
- Took ownership of the MLOps process by leading the implementation of best practices such as CI/CD to automate the seamless incorporation of valuable human feedback into our Keras/TensorFlow based ML model, used by **493** users in leadership roles
- Championed a set of team-wide best practices focused on data construction, curation, advanced feature engineering, and model development using Docker, resulting in a remarkable **2X** enhancement in data modeling efficiency
- Collaborated closely with a diverse range of cross-disciplinary partners and highly knowledgeable HDD manufacturing SMEs, resulting in impactful and innovative solutions
- Entrusted with the responsibility of effectively presenting my team's work and results to diverse audiences, including technical, non-technical, and executive leadership teams

Data Science Intern, Pacific Northwest National Laboratory (PNNL), Richland, WA   Summer 2017

Visiting Researcher, US Army Research Laboratory (ARL), Adelphi, MD   Summer 2015

SELECTED RESEARCH PUBLICATIONS

Recommendations for Streaming Data   (Won SIGIR travel award to present) CIKM

- Real-time recommendation system for any application like books, movies, and online dating
- Uses negligible on-core storage; **2X** faster than state-of-the-art; self-improving and works in online setting

Deep Network Signatures for Subgraph Classification   (Virtual presentation) KDD

- Highly scalable graph classification system that can early-detect network transformations

Node Classification in Topologically Heterogenous Networks   (In-person presentation) MILCOM

- Detection of adversarial actors in diverse and heterogeneous social networks using node classification

The Intrinsic Scale of Networks is Small   (Invited to present) ASONAM

- Quantification of structure and robustness of networks that guides downstream analysis

EDUCATION

PhD in Computer Science, Rensselaer Polytechnic Institute, Troy, NY   Summer 2018
MS in Computer Science, University of Minnesota - Twin Cities, Minneapolis, MN   Spring 2013
BEng in Electronics & Communication, Visvesvaraya Technological University, Mysuru, India   Fall 2011

SERVICE

Technical Program Committee Member: NeurIPS; ICLR (Area Chair); KDD; UAI; IJCNN; IEEE TSP, ICIP

SKILLS

Python	pandas, scikit-learn, numpy, Keras, TensorFlow, PyTorch, Docker, Flask
AI/ML	Deep Learning, Data Augmentation, Segmentation, Classification, Graphs, Anomaly Detection, NLP, LLMs
Other	Git, bash, A/B testing, macOS, Linux, Windows