KSHITEESH HEGDE

San Jose, CA hegdekshiteesh kshiteesh hegde.ai

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 ∼**1000** 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 ∼**500** users, including in senior 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 **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: ICLR (Area Chair); KDD; NeurIPS; CIKM; 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, SQL, macOS, Linux, Windows