

Namit Juneja

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Research Experience

University at Buffalo Data Science Group

PhD Candidate, Department of Computer Science

Jan 2020 - Present

- Developed a cost-adaptive Bayesian optimization technique that minimizes an objective function in as little compute cost as possible by dynamically adjusting the system configuration based on its compute load
- Designed an algorithm for learning nonlinear low-dimensional representations from massive high-dimensional datasets, thereby facilitating scientific discovery
- Designed a metric to enhance similarity computations for scientific morphology data by creating an intuitive graphical representation, improving data analysis and scientific discovery

Stanford HCI Group

Undergraduate Student Researcher

May 2015 - Aug 2016

Developed an open-governance model for crowdsourcing platforms to amplify trust between workers and requesters in the marketplace. The contributions lead to the publication of a research paper at UIST and other venues

Work Experience

Data Scientist — Zeblok, New York City

May 2018 - Sept 2020

- Developed statistical models for analysis of patient's gait, encompassing cadence, asymmetry, velocity, and more
- Developed machine learning algorithms utilizing foot plantar pressure measurement sensor data to accurately infer patient's muscle characteristics

Software Engineer — Knowlarity, New Delhi

Dec 2016 - May 2018

- Utilized machine learning models to predict user behavior, by integrating real-time interactions and historical data in order to tailor user experience, resulting in ~30% reduction in daily support calls
- Created data pipeline for large-scale ML model development using AWS Serverless architecture, DynamoDB and Scala

Sloopstream — Co-founder, New Delhi

June 2017 - July 2019

Designed an award-winning retail device to analyze people's behavior in open spaces, successfully deployed in 30+ stores across New Delhi

Educatrium Ventures, — Software Engineer Intern, Shanghai

June 2016 - Aug 2016

Developed an end to end testing framework for Chinese high school students that generates a personalized SAT curriculum based on their individual performance. Currently being used by over 200,000 students in China.

Selected Publications

- "Resource Efficient Bayesian Optimization", IEEE International Conference on Cloud Computing (CLOUD), China, 2024
- "Graph-based Strategy for Establishing Morphology Similarity", ACM Conference on Scientific and Statistical Database Management (SSDM), USA, 2021
- "Boomerang: Rebounding the Consequences of Reputation Feedback on Crowdsourcing Platforms", User Interface Software and Technology Symposium (UIST), Japan, 2016

Education

University at Buffalo, Buffalo —

Ph.D. - Computer Science

January 2020 - Present

Advisor: Dr. Varun Chandola

University at Buffalo, Buffalo —

M.S. - Computer Science

September 2018 - January 2020

VIT University, Vellore, India —

B.Tech. - Electronics & Communication

July 2013 - May 2017

Skills

Specialized

Machine learning, autoML, active learning, bayesian optimization, embeddings, clustering, deep learning

Statistics

Bayesian inference, density estimation, data analysis, visualization, gaussian process regression, uncertainty quantification

Software

Python, PyTorch, NumPy, OpenMP, MPI, CUDA, Slurm, SQL, unix, git, AWS, GCP, C++, Docker, Singularity

Teaching

Introduction to Machine Learning -

TA - Spring 2024

Introduction to Computer Science -

TA - Fall 2023

Awards & Honors

Winner - Bloomberg CodeCon

at University at Buffalo, 2018

Chancellor's Special Achiever's Award

at VIT University, 2016 & 2017

Hackathon Winner at HackMIT (2016),

PennApps (2017 & 2018), AngelHack (2018) & UB ACM Hack (2020)

International Award for Young People by

The Duke of Edinburgh's International Award Foundation, 2019