

# Anurag Dutt

Department of Computer Science  
Stony Brook University, NY, USA, 11790  
☎ +1 (347) 740-5056

✉ [adutt@cs.stonybrook.edu](mailto:adutt@cs.stonybrook.edu)  
🏠 [anuragdutt.github.io](https://anuragdutt.github.io)  
🎓 Google Scholar

## EDUCATION

---

### Stony Brook University

*PhD. in Computer Science*

GPA: 4.0/4.0 Advisors: Dr. Anshul Gandhi

2022 - present

### Stony Brook University

*Masters in Applied Mathematics & Statistics with minor in Computer Science*

GPA: 3.85/4.0 Advisors: Dr. Anshul Gandhi, Dr. Christian Luhmann & Dr. Fusheng Wang

2019 - 2021

### Columbia University

*Masters in Operations Research & Financial Engineering*

GPA: 3.3/4.0

2017 - 2018

## PUBLICATIONS

---

### Preprints and Submissions

\* - equal contribution, # - contribution credited as research assistant

1. **GAMMA: Graph Neural Network-Based Multi-Bottleneck Localization for Microservices Applications**  
Gagan Somashekar, **Anurag Dutt**, Mainak Adak, Tania Lorido Botran, Anshul Gandhi  
*accepted in WWW, 2024 (paper selected for oral presentation in top 5% papers)*
2. **Efficiently sharing the GPU for Deep Learning Workloads with Herald**  
Ubaid Ullah Hafeez, **Anurag Dutt**, Mainak Adak, Anshul Gandhi  
*submitted in EuroSys, 2025*
3. **Social Learning via Bayesian Inverse Reinforcement Learning: Learning from and about a Learner**  
Alexandra Ortmann, **Anurag Dutt**, Christian Luhmann  
*submitted in CogSci, 2024*
4. **Distinguishing Mechanisms of Social Influence to optimize Network Interventions**  
**Anurag Dutt**, Christian Luhmann  
*submitted in Nature Human Psychology, 2024*

### Conference Publications

1. **Evaluating the energy impact of device parameters for DNN inference on edge**  
**Anurag Dutt\***, Sri Pramodh Rachuri\*, Ashley Lobo, Nazeer Shaik, Anshul Gandhi, Zhenhua Liu  
*14th International green and sustainable computing conference (IGSCC), 2023*
2. **B-MEG: Bottlenecked-Microservices Extraction Using Graph Neural Networks.**  
Gagan Somashekar, **Anurag Dutt**, Rohith Vaddavalli, Sai Bhargav Varanasi, Anshul Gandhi  
*International Conference on Performance Engineering (ICPE), 2022*
3. **SMOOTH-GAN: Towards Sharp and Smooth Synthetic EHR Data Generation.**  
Sina Rashidian, Fusheng Wang, Richard Moffitt, Victor Garcia, **Anurag Dutt**, Wei Chang, Vishwam Pandya, Janos Hajagos, Mary Saltz, Joel Saltz  
*Artificial Intelligence in Medicine (AIME), 2020*

### Publications credited as Research Assistant

1. **Stock market trading in the aftermath of an accounting scandal**  
Renuka Sane, **Anurag Dutt**#  
*Emerging Markets Review, 2019*
2. **From participation to repurchase – Low-income households and micro-insurance**  
Renuka Sane, Susan Thomas, **Anurag Dutt**#  
*Journal of Risk and Finance, 2019*

## Theses

1. **Evaluating the energy impact of device and workload parameters for DNN inference on edge.**

**Anurag Dutt**, Anshul Gandhi

*Graduate Thesis towards completion of PhD Qualifier, Department of Computer Science, SBU, 2023*

## SELECTED RESEARCH PROJECTS

---

### **OptiSplit: Maximizing LLM Inference Throughput via Efficient Attention Head Distribution on Heterogeneous GPUs**

*2023 - present*

Advisors: Dr. Anshul Gandhi, Dr. Zhenhua Liu (*Stony Brook University*)

This project investigates optimal distribution of attention heads across heterogeneous GPU configurations to maximize inference speed for Large Language Models (LLMs).

### **IrEne: Interpretable Energy Prediction for Transformers**

*2024 - present*

Advisors: Dr. Anshul Gandhi, Dr. Niranjana Balasubramaniam, Dr. Aruna Balasubramaniam (*Stony Brook University*)

The project focuses on building prediction models for energy consumption of Large Language models (LLMs) for distributed setups for tensor and pipeline parallelism. The project was recently selected for an OVPR seed grant.

## SELECTED AWARDS AND HONORS

---

- Student travel grant to attend **USENIX ATC '2023** *2023*
- Student travel grant to attend **IGSCC '2023** *2023*
- **Certificate of merit** for finishing 3rd in AMS graduate program *2021*
- **Chairman's fellow** in Department of Computer Science, SBU for 2 years running *2022 - 2023*
- Awarded NTSE Scholarship from Government of India. *2013*

## TALKS

---

- **Energy Efficient Computing for Edge devices**

– 14th International Green and Sustainable Computing Conference (IGSCC)

*Oct 2020, Toronto, CA*

## WORK EXPERIENCE

---

### **Roc Capital LLC**

*2019, 2021-2022*

*Sr. Data Scientist*

Stack: Python, PyTorch, MLflow, Weights & Biases, SigOpt, ONNX, streamlit, PostgreSQL, docker, Kubernetes & KubeFlow, Prometheus, Grafana, Sagemaker

- My role involved designing, implementing, and maintaining scalable infrastructure and automation pipelines to streamline the deployment, monitoring, and management of deep learning models in production environments, for a hedge fund

### **Thomson Reuters**

*2018*

*Data Science Intern*

Stack: Python, Sci-kit learn, PyTorch, Jenkins, Prometheus, fiddler, TensorRT

- Led the development and deployment of advanced deep learning-based pricing models for exotic credit default swaps, implementing robust infrastructure and automation pipelines to ensure seamless model deployment and real-time monitoring

## PROFESSIONAL RESPONSIBILITIES

---

- *Reviewing:* USENIX ATC '24, ACM Sigmetrics (2022 - 2023), Middleware (2023)

- *Mentorship*

– Students

\* Nazeer Shaik

Master's Advanced Project, Stony Brook University, 2022-2023 (w\ Dr. Anshul Gandhi)

\* Sarath Shiva Kondeti

Master's Advanced Project, Stony Brook University, 2022-2023 (w\ Dr. Anshul Gandhi)

\* Mainak Adak

Master's Advanced Project, Stony Brook University, 2022-2024 (w\ Dr. Anshul Gandhi)

- *Graduate Teaching Assistantship* - Department of Computer Science, Stony Brook University

- Natural Language Processing - *Prof. Niranjan Balasubramanian*

*Fall 2022*

- Probability & Statistics for Computer Science - *Prof. Anshul Gandhi*

*Spring 2023*

- *Secretary - SIAM student chapter* - Applied Mathematics & Statistics

*2019 - 2021*