Vinayak Gupta

CONTACT INFORMATION	IBM Research, Gurugram, Haryana *WWW:* `https://gvinayak.github.io`	*Voice:* (+91) 8368416976 *E-mail:* guptavinayak51@gmail.com

INTERESTS

Deep Learning for Time-Series, Recommendation Systems, Spatial Data Mining, and Graphs.

EDUCATION

Indian Institute of Technology (IIT) Delhi

Ph.D. in Data Mining.   2017 – 2022

- Dissertation: "Modeling Time-Series for Recommendations and Other Applications".

Indian Institute of Information Technology (IIIT) Jabalpur

B.Tech. in Computer Science and Engineering.   2013 – 2017

INDUSTRY EXPERIENCE

IBM Research   Aug. 2022 – Present
Research Scientist
Working in the Data & AI research team to include temporal context in natural language models.

Amazon Inc.   Jan. 2022 – June 2022
Applied Science Intern
Worked with the ML team on time-sensitive reward distribution for users in Amazon Pay. The project involved modeling the periodicity and missing events in users' transaction records.

Siemens Healthcare AG   May 2016 – Jan. 2017
Research Intern
Designed ML models to improve image quality during radiography and fluoroscopy.

HONORS AND AWARDS

Expert Talk at IndiaAI: Organized by NASSCOM and Ministry of IT – Govt. of India.	2022
NASSCOM AI Game-Changers of India: Runner-Up.	2022
Microsoft and Google (Declined) Travel Grant to attend ACM SIGKDD.	2022
Outstanding Doctoral Paper Award: The First Intl. Conference on AI-ML Systems.	2021
ACM SIGIR Student Grant for CIKM.	2021
Review Score of 10/10 with "ground-breaking work" comment in AISTATS.	2021
All India 9th Rank in ABU Asia-Pacific Robocon.	2015
Project selected for 'Make In India' – India's Flagship Manufacturing Initiative.	2015

SELECTED PUBLICATIONS

V. Gupta and S. Bedathur. ProActive: Self-Attentive Temporal Point Process Flows for Activity Sequences. ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**). 2022.

V. Gupta, S. Bedathur, and A. De. Learning Temporal Point Processes for Efficient Retrieval of Continuous Time Event Sequences. AAAI Conference on Artificial Intelligence (**AAAI**). 2022.

V. Gupta, S. Bedathur, S. Bhattacharya, and A. De. Modeling Continuous Time Sequences with Intermittent Observations using Marked Temporal Point Processes. ACM Transactions on Intelligent Systems and Technology (**ACM TIST**). 2022.

V. Gupta and S. Bedathur. Doing More with Less: Overcoming Data Scarcity for POI Recommendation via Cross-Region Transfer. ACM Transactions on Intelligent Systems and Technology (**ACM TIST**). 2022.

V. Gupta and S. Bedathur. Modeling Spatial Trajectories using Coarse-Grained Smartphone Logs. IEEE Transactions on Big Data (**IEEE TBD**). 2022.

V. Gupta, S. Bedathur, S. Bhattacharya, and A. De. Learning Temporal Point Processes with Intermittent Observations. Conference on Artificial Intelligence and Statistics (**AISTATS**). 2021.

V. Gupta and S. Bedathur. Region Invariant Normalizing Flows for Mobility Transfer. ACM Conference on Information and Knowledge Management (**CIKM**). 2021.

A. Likhyani*, **V. Gupta***, P. K. Srijith, P. Deepak, and S. Bedathur. Modeling Implicit Communities from Geo-tagged Event Traces using Spatio-Temporal Point Processes. Conference on Web Information Systems Engineering (**WISE**). 2020.

S. Maurya*, **V. Gupta***, and V.K. Jain. LBRR: Load Balanced Ring Routing Protocol for Heterogeneous Sensor Networks with Sink Mobility. IEEE Wireless Communications and Networking Conference (**WCNC**). 2017.

TUTORIALS AND WORKSHOPS	**V. Gupta** et al. Advances in NLP Research for Automated Business Intelligence. Tutorial at International Conference on Natural Language Processing (**ICON**). 2022.
	V. Gupta and S. Bedathur. Modeling Human Actions in Time-Stamped Activity Sequences. Applied Machine Learning Methods for Time Series Workshop (AMLTS at **CIKM**). 2022.

SELECTED TALKS

"Modeling Time Series for Recommendation and Other Applications"
- Georgia Institute of Technology, Atlanta. — Oct. 2022
- University of Michigan, Ann Arbor. — Oct. 2022
- University of Washington, Seattle. — Sep. 2022
- University of Notre Dame, Indiana. — Sep. 2022
- IBM India Research Lab, Bangalore. — June 2022
- Technical University of Munich, Germany. — June 2022

"Large Scale Retrieval of Continuous-Temporal Sequences"
- NASSCOM AI Game-Changers of India Ceremony. — June 2022
- Amazon Research Days. — Dec. 2021

"Learning Neural Models for Temporal Sequences with Missing Events"
- ACM India Research and Careers for Students Symposium [Oral]. — Feb. 2022
- Doctoral Symposium: AI-ML Systems [Outstanding Paper Award]. — Nov. 2021

"Thinking Beyond Complete Data with Neural Temporal Point Processes"
- Research Symposium: IIT Delhi. — Dec. 2019
- AI Week at MIT-IBM Research Lab. — Sep. 2021

"Maxima: Electronic Mask for Patients with Exercise-Induced Asthma"
- Siemens Innovation Research Lab Exhibition at Erlangen, Germany. — July 2016
- Make-In-India Quality Improvement Programme (QIP) — Dec. 2015

COURSES	**Teaching Assistant**: Information Retrieval, Machine Learning, Data Mining, Data Structures, Computer Networks, and Intro. to Programming.
	Credit: Deep-, Machine- & Reinforcement-Learning, Computer Architecture, Network Security, Software Engineering, and Game Theory.
REVIEWER	AAAI 2022-23, SIGIR 2022, WSDM 2022, WWW 2022, ACM TOIS, and ICML 2022 Workshop.
SKILLS	**Proficient**: Python – Tensorflow, Keras, Pytorch, MATLAB, PHP, IBM Cloud, and AWS.
	Intermediate: C, C++, MySQL, and PySpark.
OTHER ACTIVITIES	• Administrator of four high-performance GPU servers at IIT Delhi.
	• Member of the Ph.D./M.S. Graduate Admissions Committee for Fall 2020 and Spring 2021.

REFERENCES

Srikanta Bedathur
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