Akshita Maradapu Vera Venkata Sai

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Research Interests

- Privacy Aware Computing
- Mobile Edge Computing
- Digital Twin Networks
- Location Based Social Networks
- Mobile Crowd Sourcing Systems
- Machine Learning

Education

Expected (July 2023)	Georgia State University, Atlanta, GA Ph.D. in Computer Science Dissertation: "User Centric privacy preservation in IoT" Advisors: Dr Yingshu Li and Dr. Zhipeng Cai GPA: 3.94/4.0
December 2017	Georgia State University, Atlanta, GA M.S. in Computer Science Project: "Steganography using LSB and Selective LSB models" Advisor: Dr. Xiaojun Cao GPA: 3.87/4.0
July 2016	GITAM University, Visakhapatnam, India B.Tech in Computer Science Project: "LTE/ SAE Security Issues in 4G Networks" GPA: 9.35/10.0

Teaching Experience

Teaching Fellow

Software Engineering (Spring 2019 and Spring 2020) — GSU, Atlanta

- Redesigned the course to match industry standards
- Integrated Agile methodology into the class project
- Conducted Case-study based tests for student evaluation

Data Mining (Spring 2022) — GSU, Atlanta

- Designed a coding centric course to familiarize students with data mining tools and packages
- Introduced different data mining techniques and the work behind it

Teaching Assistant

Introduction to Internet of Things (IoT) (Fall 2021) — GSU, Atlanta

- Conducted labs on Android Studio
- Developed labs sessions and assignments on telos b motes
- Graded labs and tests and assisted in evaluating course projects

Database Systems (Fall 2020) — GSU, Atlanta

- Conducted labs on MySQL
- Graded assignments and tests

Big Data Programming (Spring 2017) — GSU, Atlanta

- Gave sessions on Hadoop
- Graded assignments and tests

Theoretical Foundations in Computer Science (Fall 2016) — GSU, Atlanta

- Conducted tutoring hours for all CS students taking this course
- Assisted the instructor in preparing quizzes and exams
- Graded exams and tests

Lab Instructor

Computer Organization and Programming (Spring 2021 and Summer 2021) — GSU, Atlanta

- Conducted weekly lab sessions on Assembly language programming for x86 architecture
- Graded lab assignments and exams

Principles of Computer Science II (Fall 2019) GSU, Atlanta

- Conducted weekly lab sessions for over 40 students in JAVA
- Graded labs, exams, and quizzes

Professional Activities

- Reviewer of the research journals:
  - IEEE Access
  - ACM Transactions on Sensor Networks
  - IEEE Transactions on Computational Social Systems
  - IEEE International Conference on Wireless Algorithms, Systems and Applications
  - IEEE Transactions on Network science and Engineering
- Mentored and Assisted of a Project in an REU project, funded by NSF
- Mentored a Master's student on their thesis
- Mentored an Undergraduate Honors College student on their thesis
- Board Member (Membership Chair) of the GSU IEEE Student Chapter
- Committee Chair of College of Arts and Science Tech Fee Committee

Publications

Currently working

A. M. V. V. Sai and Y. Li, "Privacy-Aware Location Recommendation in Mobile Edge Systems", 2022
A. M. V. V. Sai and Y. Li, "Adaptive privacy preservation of online check-in data in LBSNs", 2022

Published Journals and Conferences

[Neurocomputing]Q. Luo, D. Yu, A. M. V. V. Sai, Z. Cai, X. Cheng, "A Survey of Structural Representation Learning for Social Networks", *Neurocomputing*, 2022, ISSN 0925-2312.

[IEEE SCI]A. M. V. V. Sai, K. Zhang and Y. Li, "User Motivation Based Privacy Preservation in Location Based Social Networks," *2021 IEEE SmartWorld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Internet of People and Smart City Innovation (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI)*, 2021, pp. 471-478, doi: 10.1109/SWC50871.2021.00070.

[IEEE IDPDC] F. Zhao, Y. Huang, A. M. V. V. Sai and Y. Wu, "A Cluster-based Solution to Achieve Fairness in Federated Learning," *2020 IEEE Intl Conf on Parallel & Distributed Processing with Applications, Big Data & Cloud Computing, Sustainable Computing & Communications, Social Computing & Networking (ISPA/BDCloud/SocialCom/SustainCom)*, 2020, pp. 875-882, doi: 10.1109/ISPA-BDCloud-SocialCom-SustainCom51426.2020.00135.

[TVT] Y. Lin, Z. Cai, X. Wang, F. Hao, L. Wang and A. M. V. V. Sai, "Multi-Round Incentive Mechanism for Cold Start-Enabled Mobile Crowdsensing," in *IEEE Transactions on Vehicular Technology*, vol. 70, no. 1, pp. 993-1007, Jan. 2021, doi: 10.1109/TVT.2021.3050339.

[JOCO] Z. He, **A. M. V. V. Sai**, Y. Huang,H. Zhang and Q. Han,"Differentially private approximate aggregation based on feature selection" in *Journal of Combinatorial Optimization*, 1-10.

[TST] J. Li, **A. M. V. V. Sai**, X. Cheng, W. Cheng, Z. Tian and Y. Li, "Sampling-based approximate skyline query in sensor equipped IoT networks," in *Tsinghua Science and Technology*, vol. 26, no. 2, pp. 219-229, April 2021, doi: 10.26599/TST.2019.9010060.

[IEEE Access] **A. M. V. V. Sai** and Y. Li, "A Survey on Privacy Issues in Mobile Social Networks," in *IEEE Access*. doi: 10.1109/ACCESS.2020.3009691.

[EURASIP] Y. Wang, X. Tao, F. Zhao, B. Tiaa and **A. M. V. V. Sai** (2020). "SLA-aware resource scheduling algorithm for cloud storage". *EURASIP Journal on Wireless Communications and Networking*, 2020(1), 1-10.

[IEEE Access] K. Yan, G. Lu, G. Luo, X. Zheng, L. Tian and **A. M. V. V. Sai**, "Location Privacy-Aware Task Bidding and Assignment for Mobile Crowd-Sensing," in IEEE Access, vol. 7, pp. 131929-131943, 2019.

[IEEE Access] K. Yan, G. Luo, X. Zheng, L. Tian and **A. M. V. V. Sai**, "A Comprehensive Location-Privacy-Awareness Task Selection Mechanism in Mobile Crowd-Sensing," in IEEE Access, vol. 7, pp. 77541-77554, 2019. doi: 10.1109/ACCESS.2019.2921274.

[Book Chapter] Z. He, Y. Lin, Y. Liang, X. Wang, **A. M. V. V. Sai**, and Z. Cai, Modeling Malware Propagation Dynamics and Developing Prevention Methods in Wireless Sensor Networks, pp. 231–250. Cham: Springer International Publishing, 2019. doi: 10.1007/978-3-030-16194-1_10

Affiliations

- IEEE
- ACM
- N2Women
- IEEE Young Professionals Society

Presentations and Talks

"User Motivation based Privacy Preservation in LBSNs", Internet of Things REU at GSU, 30 July 2021

"Teaching Pedagogy – Software Engineering and Other related courses", Teaching and Research Workshop at GSU, 8 June 2021
"Privacy Issues in Mobile Social Networks", Workshop on Cognitive Radio Networks, 10 February 2019

Awards and Grants

Outstanding Graduate Teaching Assistant, Department of Computer Science, GSU. 2020