Akshay Aravamudan

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Employment History

Aug 2016 – present	🔖	**Research Assistant**, Department of Computer Engineering and Sciences, Florida Institute of Technology.
Jul 2019 – Nov 2019	🔖	**Teaching Assistant**, Machine learning primer for UCF/Disney's Lifelong Learning Program.
Aug 2016 – May 2019	🔖	**Interface Developer**, Department of Systems Engineering, Florida Institute of Technology.
Aug 2015 – May 2016	🔖	**Mathematics Tutor**, Mathematics Advancement Centre (MAC), Florida Institute of Technology.

Education

Aug 2019 – present	🔖	**Ph.D. Computer Engineering, Florida Institute of Technology**. Under advisement of Dr. Georgios C. Anagnostopoulos.
Aug 2018 – Jul 2019	🔖	**M.S. Computer Engineering, Florida Institute of Technology**, Focus in Machine learning and Computing. Under advisement of Dr. Georgios C. Anagnostopoulos. Thesis title: *Modelling Information diffusion via Survival Processes*.
Aug 2014 – May 2018	🔖	**B.S. Computer Engineering, Florida Institute of Technology**, Summa Cum Laude, Minor in Computational Mathematics.

Research Publications

Publications

1 Rasheed, Z., **Aravamudan**, A., Sefidmazgi, A. G., Anagnostopoulos, G., & Nikolopoulos, E. (2021). Advancing flood warning procedures in ungauged basins with machine learning. *Journal of Hydrology*. **[Under Review]**. 🔗 doi:10.31223/X5X03X

2 **Aravamudan**, A., Zhang, X., Song, J., Fiore, S. M., & Anagnostopoulos, G. C. (2021). Influence dynamics among narratives: A case study of the venezuelan presidential crisis. In *Lecture Notes in Computer Science: Social, Cultural, and Behavioral Modeling*. **[In Press]**, Switzerland: Springer Nature.

3 Wyatt, S., Elliot, D., **Aravamudan**, A., Otero, C. E., Otero, L. D., Anagnostopoulos, G. C., … Lam, E. (2021). Environmental sound classification with tiny transformers in noisy edge environments. In *7th IEEE world forum on internet of things, wf-iot 2021, new orleans, la, usa, june 14- july 16, 2021*. **[In Press]**, IEEE.

Presentations

1 Rasheed, Z., **Aravamudan**, A., Anagnostopoulos, G. C., Sefidmazgi, A. G., & Nikolopoulos, E. I. (2020). Machine learning for flood peak prediction in ungauged basins. In *American Geophysical Union (AGU) Fall Meeting 2020*. [**extended abstract**]. Retrieved from
🔗 https://agu.confex.com/agu/fm20/meetingapp.cgi/Paper/749892

2 Zhang, X., **Aravamudan**, A., Koufakou, A., Gunaratne, C., Garibay, I., & Anagnostopoulos, G. (2020). Predicting software vulnerability exploits from social media confabulations. In *6ᵗʰ International Conference on Computational Social Science (IC²S²)*. [**extended abstract & poster**], Massachusetts Institute of Technology, Cambridge, MA. Retrieved from
🔗 https://www.youtube.com/watch?v=YzmHUejqdn4

Upcoming Submissions

1 **Aravamudan**, A., Zhang, X., & Anagnostopoulos, G. C. (2022). A dynamic popularity prediction model using hybrid survival processes. **[To be submitted August 2021]**.

2 Zhang, X., **Aravamudan**, A., & Anagnostopoulos, G. C. (2022a). Any-time information cascade size prediction with ballpark confidence. **[To be submitted August 2021]**.

3 Zhang, X., **Aravamudan**, A., & Anagnostopoulos, G. C. (2022b). Predicting software vulnerability exploits from social media confabulations. **[To be submitted August 2021]**.

Skills

Coding	▌	Python, Java, C, C++ and LᴬTEX.
Python libraries	▌	Dask, Numpy, Scipy, Keras, PyTorch, librosa, pyroomacoustics and OpenCV.
Technologies	▌	AWS: CodeBuild, CodePipeline, S3, EC2, CLI. Linux, MPI, OpenMP, CUDA, git and svn.
ML modelling	▌	Neural networks, decision trees, gradient boosting, random forests, probabilistic modelling, stochastic processes and convex optimization.
Misc.	▌	Academic research, teaching, and LᴬTEX typesetting.

Professional Service

▌ Reviewer, 2021 International Conference on Systems, Man & Cybernetics (*IEEE-SMC 2021*); 2 papers.

▌ Member, Program Committee, 2021 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (*SBP-BRiMS 2021*); 1 paper.

▌ Volunteer, 2021 International Conference on Learning Representations (*ICLR 2021*).

▌ Sub-reviewer, 2021 Conference on Autonomous Agents & Multi-Agent Systems (*AAMAS 2021*); 1 paper.

References

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