

MAKAN ARASTUIE



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makanarastuie.com



github.com/Makan-Ar

EDUCATION

Jan. 2018 – Aug. 2020
Toledo, OH

MSE, Computer Science & Engineering

@ University of Toledo

- o GPA: 4.00 / 4.00 | Advisor: Kevin S. Xu
- o Research focus: Machine Learning & Social Network Analysis
- o Thesis: Generative Models of Link Formation and Community Detection in Continuous-time Dynamic Networks

Aug. 2013 – Dec. 2017
Toledo, OH

BSc, Computer Science & Engineering

@ University of Toledo

- o GPA: 3.91 / 4.00 | Minor in Mathematics | Honors: Summa cum laude | Tau Beta Pi, ACM, IEEE

PUBLICATIONS

- 2020 [1] M Arastuie, S Paul, and K Xu. "CHIP: A Hawkes Process Model for Continuous-time Networks with Scalable and Consistent Estimation" *NeurIPS* ([link to paper](#))
- 2019 [2] M Arastuie and K Xu. "Personalized Degrees: Effects on Link Formation in Dynamic Networks from an Egocentric Perspective" *Companion Proceedings of The Web Conference (WWW)* ([Link to paper](#))
- 2019 [3] M Sloma, M Arastuie, and K Xu. "Effects of Activity Recognition Window Size and Time Stabilization in the SHL Recognition Challenge" *Human Activity Sensing, Springer* ([link to paper](#))
- 2018 [4] M Sloma, M Arastuie, and Kevin S. Xu. "Activity Recognition by Classification with Time Stabilization for the SHL Recognition Challenge" *Proceedings of UbiComp* ([link to paper](#))

PROFESSIONAL EXPERIENCES

Industry

Aug. 2020 – Present
Jan. 2020 – July 2020
Longmont, CO

Data Scientist II

@ Seagate

Data Science and Machine Learning Intern

- o Reduced hard drive calibration time by about 20% (1hr) by modeling historical calibration settings using deep unsupervised learning
- o Collected an industry-specific corpus (~2B tokens) by gathering & cleaning >7M docs from 12 sources
- o Trained several industry-specific language models and utilized them in various downstream natural language processing tasks such as summarization, information retrieval, and sentiment analysis
- o Mentored and managed 9 interns on diverse machine learning projects
- o **Technologies:** Python, PyTorch, SQL, Docker, AWS, DVC, Flask

Aug. 2015 – Dec. 2017
Toledo, OH

Student Software Developer

@ University of Toledo (Simulation & Gaming Studio)

- o Collaborated with [Twine.it](#) and improved their RESTful API's average response time by about 30%
- o Developed an online educational game to simulate disaster scenes for emergency responders
- o **Technologies:** C#, C++, JavaScript, SQL, HTML, CSS, Azure, REST

Jan. 2015 – May 2015
Canton, OH

Software Developer Intern

@ Diebold Nixdorf

- o Improved ATM's front-end UX and UI which reduced withdraw transaction time by about 40%
- o Upgraded ATM's messaging simulator to keep it compatible with new back-end updates
- o **Technologies:** C#, JavaScript, RabbitMQ, HTML, CSS, Object oriented programming

Research

Jan. 2018 – Aug. 2020
May 2016 – Dec. 2017
Toledo, OH

Graduate Research Assistant

@ IDEAS Lab (Univ. of Toledo EECS Dept.)

Undergraduate Research Assistant

- o Proposed a generative model for continuous-time networks of relational events with scalable and consistent estimators ([publication \[1\]](#))

- o Developed a Python package for the study of dynamic networks ([link to documentation](#))
- o Designed a machine learning post-processing technique to improve prediction accuracy of human activity, using smartphone sensor data (*publications [3, 4]*)
- o Analyzed the impacts of local neighborhoods on predicting future interactions among people in social networks (*publication [2]*)
- o **Technologies:** Python, TensorFlow, PyTorch

Teaching

2018 – 2019
Toledo, OH

Teaching Assistant

@ University of Toledo

- o **EECS 1510**, *Object Oriented Programming*, Spring 2018
- o **EECS 3100**, *Embedded Systems*, Summer 2018
- o **EECS 1100**, *Digital Logic Design*, Fall 2018 – Spring 2019

PROFESSIONAL SERVICES

2020
2018 – 2021

Program Committee: SocInfo (2020)

Reviewer: The Web Conference (WWW) (2019, 2020, 2021)

IEEE Transactions on Computational Social Systems (2021) – IEEE BigData (2020)

Journal of Data Science and Analytics (2020) – Journal of Complex Networks (2019) – SocInfo (2019)

PROJECTS

Feb. 2018 – Present

Founding Contributor of DyNetworkX – IDEAS Lab

An open-source Python package for the analysis of discrete- and continuous-time dynamic networks

- o Documentation & source code: dynetworkx.readthedocs.io

Jan. 2016 – July 2016

Connected UT – Solo Project

A website for the University of Toledo's students to sell/buy textbooks, with extended search options

- o Source code: github.com/makan-ar/connected-ut

AWARDS

2018

Dean's Assistantship

@ University of Toledo

Awarded once a year to one incoming master's student in the College of Engineering

2017

Undergraduate Summer Research grant

@ University of Toledo

2013

International Student Scholarship

@ University of Toledo

RELEVANT COURSEWORK

Natural Language Processing Specialization (Coursera MOOCs)

Deep Unsupervised Learning (Open access course by UC Berkeley / in progress)

Deep Learning Specialization (Coursera MOOCs) | Probabilistic Methods in Data Science

Machine Learning | Social and Information Networks | Artificial Intelligence

Data Learning | Linear Statistical Models | Statistical Computing