Yuanqi Du

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EDUCATION

George Mason University *Aug 2017 - May 2021*
B.S. Computer Science *Fairfax, VA*

- GPA: 4.0 / 4.0
- Honors/Awards: Dean List (2018-2019), Outstanding UTA Award (Spring 2019)

PUBLICATION

- "Generative Multi-Stream Architecture For American Sign Language Recognition" accepted in 2019 IEEE MIT URTC
- "American Sign Language Recognition Using an FMCW Wireless Sensor" accepted in AAAI 2020 Student Abstract & Poster Program
- "Expressive ASL recognition using milli-meter wave wireless signals" under review of IEEE SECON 2020

PROFESSIONAL EXPERIENCES

Department of Computer Science at George Mason University *Aug 2018 - Present*
Undergraduate Teaching Assistant *Fairfax, VA*

- Assist professor with administrative and academic tasks in the *Object-oriented Programming, Data Structures* and *Data Mining* courses, e.g. Test and Grade students' code with certain expectations, and hold office hours
- Provide online and in-person academic supports to students by answering questions pertaining to class lectures, lab exercises, projects and career/research insights
- Observe and summarize problems which many students have in order to provide feedback and give suggestions based on the problems to professors to improve the curriculum

Volgenau School of Engineering at George Mason University *Feb 2019 - May 2019*
Peer Mentor *Fairfax, VA*

- Guided students to think of problems in more professional and engineering aspects
- Aided students with their questions, e.g. projects, obscure concepts, and demonstrated how the knowledge is applied in the industry and the prospects of the fields to make them understand better
- Mastered how to break complicated things into small parts and interpret them piece by piece, how to connect the knowledge with real-world applications and how to convey the ideas to others clearly

RESEARCH EXPERIENCES

American Sign Language Recognition *Apr 2019 - Present*
Research Assistant (Advisor: Parth Pathak) *Fairfax, VA*

- Work closely with professor and PhD student on an American sign language recognition research project using a wireless sensor and a 3D camera
- Collect ASL dataset, clean, pre-process, analyze, visualize the wireless sensor 3D streamed data and built deep learning model to make predictions on both word-level and sentence-level predictions
- Achieve 0.79% word-level error rate and 1.25% sentence-level error rate by our working system

American Sign Language Recognition *Jun 2019 - Aug 2019*
Undergraduate Researcher (Mentors: Parth Pathak, Jana Kosecka, Huzefa Rangwala) *Fairfax, VA*

- Utilized a FMCW wireless sensor to recognize ASL (American Sign Language) grouped with people from other disciplines (e.g. Electrical Engineering, Bio-Engineering) and professional ASL users
- Created a data preprocessing model (Cell Division Algorithm) for wireless sensor cloud point time series data and selected the best compatible machine learning model to make ~95% accuracy on a single user with a list of 19 common words (30 samples of each) and achieved ~80% accuracy on cross-user (3 users) with 30% different users' data combined
- Succeeded to design a workable system for a novel task with few supporting related works and collaborated with the team using Kinect (Camera) to recognize ASL

Ensemble Anomaly Detection Algorithm *Oct 2018 - Dec 2018*
Research Assistant (Adviosr: Carlotta Domeniconi) *Fairfax, VA*

- Assisted professor and PhD student with a data mining research project
- Pre-processed datasets [R], analyzed datasets [Python] and tested the ensemble algorithm on the datasets
- Learned how to clean, pre-process, analyze, visualize data and improved the ability to solve problem individually

SKILLS

- **Skills:** Python (Advanced), Java (Advanced), C (Proficient), MySQL (Proficient), R (Basic), C++ (Basic)
- **Tools:** TensorFlow/Keras/Pytorch (Intermediate)
- **Languages:** English (Fluent), Chinese (Native)
- **Activities:** American Statistical Association (Member), NetBrain Club (Research Director)