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Education:

University of Florida — Gainesville, FL
Doctor of Philosophy, Electrical and Computer Engineering — 06/17-present
Research Interest: Machine Learning, Pattern Recognition, and Computational Intelligence

University of Florida — Gainesville, FL
Master of Science, Electrical and Computer Engineering — 06/17-12/19
Related Coursework: Fundamentals of Machine Intelligence, Math for Intelligent Systems, Machine Learning, Foundations of Digital Signal Processing, Image Processing and Computer Vision

University of Alabama at Birmingham — Birmingham, AL
Bachelor of Science, Electrical Engineering (minor in Mathematics), Magna Cum Laude — 08/13-04/17

Research Experience:

University of Florida Machine Learning and Sensing Laboratory — Gainesville, FL
Research Assistant Electrical and Computer Engineering Department (Dr. Alina Zare) — 06/17-present

- Developing automated machine learning approaches for seafloor segmentation and scene understanding
- Designing and implementing novel deep learning layers focused on texture analysis

Michigan State University Summer Research Opportunities Program (SROP) — East Lansing, MI
Summer Intern Electrical and Computer Engineering Department (Dr. Hayder Radha) — 05/16-07/16

- Participated in a 10-wk residential program for students interested in graduate study
- Attended a week-long short course in statistics and R Studio software
- Investigated various software packages in Linux utilizing the integrated development environment (IDE) Eclipse and C++ language
- Utilized multiple datasets to develop an improved algorithm for lane detection

University of Alabama at Birmingham Signal Processing and Embedded Systems Laboratory — Birmingham, AL
Research Assistant Electrical and Computer Engineering Department (Dr. Abidin Yildirim) — 01/14-12/16

- Applied practical applications of circuit theory and soldering techniques
- Performed image processing techniques for a project that involved topics such as facial detection and recognition
- Worked with Arduino software that was implemented to various technologies such as a robotic arm, sensors, and Bluetooth
- Designed and interpreted circuit diagrams to properly implement hardware designs

Publications:

1. S.Walker, **J.Peeples,** A. Zare, J. Dale, and J. Keller, "Fine-tuning Deep Learning Models for Seafloor Classification in Synthetic Aperture Sonar Imagery" in Proc. SPIE 11418, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXV, 2020.
2. **J.Peeples,** M. Cook, D. Suen, A. Zare, and J. Keller, "Comparison of Possibilistic Fuzzy Local Information C-Means and Possiblisitic K-Nearest Neighbors for Synthetic Aperture Sonar Segmentation " in Proc. SPIE 11012, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIV, 2019.

3. A. Starke, J. McNair, R. Trevizan, A. Bretas, **J. Peeples**, and A. Zare, "Toward Resilient Smart Grid Communications using Distributed SDN with ML-Based Anomaly Detection" in 16th International Conference on Wired & Wireless Internet Communications, 2018.
4. **J. Peeples**, D. Suen, A. Zare, and J. Keller, "Possibilistic fuzzy local information C-means with automated feature selection for seafloor segmentation" in Proc. SPIE 10628, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIII, 2018.

Presentations:

1. Oral presentation "Comparison of Possibilistic Fuzzy Local Information C-Means and Possibilistic K-Nearest Neighbors for Synthetic Aperture Sonar Image Segmentation," **Society for Optics and Photonics (SPIE) Defense + Commercial Sensing**, 2019.
2. Oral presentation "Histogram Layer: A Novel Approach to Feature Engineering," **McKnight Doctoral Mid-Year Meeting**, 2019.
3. Oral presentation "Possibilistic Fuzzy Local Information C-Means with Automated Feature Selection for Seafloor Segmentation," **Society for Optics and Photonics (SPIE) Defense + Commercial Sensing**, 2018.
4. Oral presentation "Synthetic Aperture SONAR Soft Segmentation using Possibilistic Fuzzy Local Information C-Means," **University of Florida Water Institute Symposium**, 2018.
5. Poster presentation "Using the Engineering Force: BHAMSolo Senior Design Project" **University of Alabama at Birmingham Spring Expo,** 2017 (placed 1st in Service-Learning category and served as Team Lead for the project).
6. Poster presentation "LIVE ON: Lane, Sign, and Vehicle Detection in Various Environments," **Emerging Researchers National (ERN) Conference in STEM**, 2017 (Travel Award recipient).

Teaching and Outreach Activities:

University of Florida Electrical and Computer Engineering Department — Gainesville, FL
Supervised Teacher EEL 5840/4930 Fundamentals of Machine Learning — 08/19-12/19

- Update lecture notes and hold weekly office hours
- Assist in the preparation and grading of assignments and exams
- Participate in weekly meetings with instructor team

Successful Transition and Enhanced Preparation for Undergraduates Program (STEPUP) — Gainesville, FL
Course Co-Instructor Introduction to Coding and Programming — 07/19-08/19

- Lead lectures to introduce core concepts for programming and Python
- Developed course syllabus, assignments, and project

Course Co-Instructor Machine Learning — 07/18-08/18

- Lead lectures to introduce machine learning and remote sensing

University of Florida Student Science Training Program (SSTP) — Gainesville, FL
Mentor — 06/19-07/19

- Supervised high school student participant throughout research project
- Assisted and provided feedback for program deliverables (paper, poster and presentation)
- Tyler Kim (mentee) won SSTP best paper award

University of Alabama at Birmingham Vulcan Material Academic Success Center — Birmingham, AL
Supplemental Instruction (SI) Leader Calculus based Physics II — 01/15-04/15

- Created an intensive learning environment for undergraduate students by hosting two weekly SI sessions (75 minutes per session)
- Constructed weekly worksheets and mock exams to prepare students for class
- Maintained a constant interaction with the professor to properly align supplemental materials with the course information and requirements

Tutor Electrical circuits, Mathematics and Physics 08/14-04/17

- Assisted students in difficult subjects by working through conceptual and quantitative problems
- Lead approximately 10 one-hour sessions per week with undergraduates
- Participated in training sessions to become an Associate in the Tutoring Profession (ATP) certified Associate Tutor

Awards:

Undergraduate total: $30,000 **Graduate total:** $456,750 **Grand total:** $486,750

National Science Foundation Graduate Research Fellowship	09/18-present
Florida Education Fund McKnight Doctoral Fellowship	08/17-present
Graduate School Preeminence Award	08/17-present
Southern Regional Education Board Institute on Teaching and Mentoring Travel Award	10/18-10/20
Iva and Norman Tucker University of Florida Transportation Institute Fellowship	08/17-12/17
University of Florida Board of Education Summer Fellowship	06/17-08/17
Vulcan Materials Scholarship	08/13-04/17
Diversity Supplement Undergraduate Scholarship	08/13-04/17
Collegiate Honors Scholarship	08/13-04/17
School of Engineering Dupuis Leadership Scholarship	08/16-04/17
Cleo and Clara Thomas Academic Scholarship for Excellence	01/16-04/16
The Birmingham Chapter of the American Association of Blacks in Energy Scholarship	08/13-04/14
UAB Dean's List	Spring '14,'15 Fall '15, Spring '16
UAB President's List	Fall '16, Spring '17
Recipient of BMEN Green Blazer of Excellence	Spring '17
Commitment to Excellence in Tutoring	Spring '16
Multicultural Scholars Honor Program	Spring '16
Multicultural Scholars Program Scholar of the Year	Spring '15

Professional Service:

Conference and Journal Reviews:

Geoscience and Remote Sensing Letters, Spring 2019

Conference Roles:

Panel Chair – Computer Science Panel **2019 McKnight Doctoral Mid-Year Meeting**, February 2019
Peer Evaluator – Student Poster Session **Mid-Michigan Symposium for Undergraduate Research (Mid-SURE)**, July 2016

Leadership Experience:

Machine Learning and Sensing Laboratory (MLSL) Gainesville, FL
Outreach Coordinator 08/19-present

- Create and organize opportunities to share the MLSL's research with others in the community (i.e., STEPUP, SSTP, laboratory tours)

Departmental Representative 08/17-07/19

- Serve as liaison between the ECE department and the MLSL

Electrical and Computer Engineering Graduate Student Organization (ECE GSO) Gainesville, FL
Secretary 04/19-present

- Record meeting notes and oversee calendar of events
- Maintain listserv and reserve spaces for all activities of the ECE GSO

Faculty and Staff Social Liaison 01/18-04/18

- Planned social events to promote community in the ECE department
- Chaired the Faculty/Staff Mixer event and Graduate Volleyball team

Gator McKnights Unite (GMU) Gainesville, FL
President 04/18-04/19

- Lead graduate student organization responsible for providing personal and professional development opportunities for African American and Latinx graduate students
- Organized monthly executive board meetings and regulate the general functioning of the executive board and organization

Institute of Electrical and Electronics Engineers (IEEE) Birmingham, AL
UAB Chapter Vice Chair 06/16-04/17

- Assisted the Chapter Chair in following up on assigned committee responsibilities
- Performed all functions of the Chapter Chair in their absence or upon request

UAB School of Engineering Leadership Scholar Birmingham, AL

- Lead tours of the engineering building for prospective students 06/16-04/17
- Participated in several events throughout the year such as recruitments, award ceremonies and meetings

Multicultural Scholars Program (MSP) Birmingham, AL
UAB Chapter President 08/14-04/17

- Coordinated the activities of the executive committee, which includes oversight of the duties of executive committee members
- Served as the liaison between the executive body and the MSP director
- Served as co-Chair of the scholarship committee

Blazer Male Excellence Network (BMEN) Birmingham, AL
Mentor 08/14-04/17

- Served as a role model, counselor and motivator for incoming freshmen black male students
- Collaborated with other mentors on events throughout the year such as social and volunteer activities

Memberships:

Association for Computing Machinery (ACM) 04/18-present
National Society of Black Engineers (NSBE) 08/17-present
Order of the Engineer 04/17-present
Institute of Electrical and Electronics Engineers (IEEE) 02/16-present
National Society of Leadership and Success (NSLS) 04/15-present