Princess Priscilla Lyons CV

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EDUCATION

May 2022	**University of Florida, Doctor of Philosophy**	Gainesville

Major: Electrical and Computer Engineering
GPA: 3.52/4.00

Dec 2019	**University of Florida, Master of Science**	Gainesville

Major: Electrical and Computer Engineering
GPA: 3.52/4.00

May 2017	**University of Missouri, Dual Bachelor of Science, Honors Scholar**	Columbia

Major: Electrical Engineering, Computer Engineering
Minor: Computer Science, Mathematics and Spanish
GPA: 3.16/4.00

WORK HISTORY

May 2020 – Aug 2020   Lam Research Corporation: Data Science Intern   Fremont, CA

Worked on an Industry 4.0 initiative within the Service Analytics Research and Development group to improve automatic equipment testing and analysis between field engineers and data analysts

Developed efficient parsers to extract recommended parameters used for building statistical models from numerous technical documents and export them for easier utilization for model building

Created programs to automatically generate and filter parameters for fleet monitoring applications in developed for Lam Etch Chambers

Aug 2017 – Present   University of Florida: Graduate Research Assistant   Gainesville, FL

Conducted natural language processing research on multi-lingual datasets to analyze the effects of translation on cross-lingual authorship attribution

Conducted research utilizing techniques in machine learning, image processing and pattern recognition

Cooperated with a team of researchers from remote universities to develop an underwater environmentally adaptive target characterization and detection system

Compared and developed unsupervised and supervised anomaly and target detection methods in synthetic aperture sonar (SAS) imagery

Analyzed feature representations of writing style in various languages using machine learning and data analytics techniques

May 2017 – Jul 2017   Lockheed Martin – Space Systems: Software Engineering Intern   King of Prussia, PA

Cloned and imaged numerous servers with Microsoft Server 2012

Installed and configured various security and software patches for server stations

Created a C++ software tool to parse SDAS files of a switch matrix and located errors in the hardware configuration

Developed a C++ software tool to parse SDAS files of a switch matrix and return all USB device name, GUIDs and paths to the user

Jun 2016 – Aug 2016   Lockheed Martin – Space Systems: Software Engineering Intern   King of Prussia, PA

Collaborated with a team of software engineers on an independent research and development project

Developed a C++ driver to interface with a Serial I/O SIO4 board using a RS422 communication standard on a RedHawk Linux real-time operating system

Utilized the Hardware-in-the-Loop(HWIL) technique to troubleshoot and perform successful transmissions and receptions of data with a serial I/O SIO4 board for an integrated flight simulation

Feb 2015 – May 2017   University of Missouri: Undergraduate Research Assistant   Columbia, MO

Researched various machine learning algorithms and techniques

Cooperated with a team of interdisciplinary researchers to detect the target signature of HLB infected orange trees in Florida using hyperspectral analysis

	Conducted experiments on bed-sensor ballistocardiogram signals using Extended Functions of Multiple Instances (eFUMI) algorithm to successfully detect heartbeat signatures resulting in a publication (listed above)
Oct 2013 – Feb 2015	**University of Missouri Research Reactor: Student Technician** Columbia, MO
	Served as a computer assistant for 15 hours per week in computer hardware and desktop support for facility's 100+ employees
	Imaged numerous company desktop computers, installed necessary Windows applications, and troubleshoot Windows OS and computer hardware problems
	Worked with a team of 5 technicians to configure facility servers and mandate internet and computer security protocol
	Performed monthly maintenance on the MURR laptops, desktops and printers throughout the entire facility
Sep 2012 – Oct 2013	**University of Missouri – Learning Center: Professional Algebra Tutor** Columbia, MO
	Tutored students of different grades for 15 hours per week in intermediate and college algebra
	Conducted private study sessions with up to 3 algebra students and assisted in larger walk-in tutoring sessions with fellow tutors
	Created algebra examples with problematic solutions in order to clarify algebra concepts
	Utilized online resources, such as WebWork and WebAssign, daily to guide students in their algebra schoolwork

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PUBLICATIONS

CONFERENCE

P. Lyons, D. Suen, A. Galusha, A. Zare and J. Keller, "**Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery**," *Proc. SPIE Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIII*, vol. 10628, pp. 387–394, Apr. 2018. doi: 10.1117/12.2305175

C. Jiao, **P. Lyons**, A. Zare, L. Rosales and M. Skubic, "**Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances**," *2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, 2016, pp. 756-760. doi: 10.1109/EMBC.2016.7590812

JOURNAL

C. Jiao, B. Su, **P. Lyons**, A. Zare, K. C. Ho and M. Skubic, "**Multiple Instance Dictionary Learning for Beat-to-Beat Heart Rate Monitoring From Ballistocardiograms**," in *IEEE Transactions on Biomedical Engineering*, vol. 65, no. 11, pp. 2634-2648, Nov. 2018. doi: 10.1109/TBME.2018.2812602

PRESENTATIONS

2019	Oral presentation "Anomaly and Target Detection in Synthetic Aperture SONAR," **University of Florida, Department of Electrical and Computer Engineering**, Masters Thesis
2018	Oral presentation "Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery," **Society for Optics and Photonics (SPIE) Defense + Commercial Sensing**
2016	Poster presentation "Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances," 38th Annual **International Conference of the IEEE Engineering in Medicine and Biology Society** (EMBC)

HONORS AND AWARDS

Fall 2020	GEM Full Science Fellowship
Aug 2017 – Present	University of Florida Graduate Assistantship
May 2017	University of Missouri Honors Scholar

Aug 2016	University of Missouri, Boeing Scholarship
May 2016	University of Missouri, College of Eng., Celebration of Women in Engineering Honoree
Aug 2011 – May 2017	University of Missouri Diversity Award
Fall '14, Fall '16	University of Missouri Dean's Lists

LEADERSHIP

Fall '20 – Present	**Secretary** – African-American/African/African Diaspora Students in ECE (A3ECE)
Spr '20 – Present	**ECE Ambassador** – Univ. of Florida College of Engineering, Dept. of ECE
Fall '16 – Fall '17	**Treasurer** – Institute of Electrical and Electronics Engineers (IEEE)
Fall '15 – Fall '16	**Secretary** – Institute of Electrical and Electronics Engineers (IEEE)
Fall '14 – Fall '15	**Student Ambassador** – Univ. of Missouri College of Engineering Ambassadors

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MEMBERSHIPS

2014 – Present	Griffiths Leadership Society of Women
2013 – Present	National Society of Black Engineers (NSBE)
2013 – Present	Institute of Electrical and Electronics Engineers (IEEE)
2013 – Present	Association for Computing Machinery (ACM)
2012 – Present	Mizzou Collegiate Scholars