Emily Garceau

Disciplined and driven computer engineer improving technology and building connections in fast-paced environments.

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Raleigh, North Carolina

Education

Doctor of Philosophy in Computer Engineering **2023-Present**
North Carolina State University GPA: 4.0
Goodnight Doctoral Fellowship Provost's Doctoral Fellowship
University Graduate Fellowship Graduate Merit Award

Bachelor of Science in Computer Engineering **2019-2023**
Clemson University Honors College GPA: 4.0
Rhodes Most Outstanding Senior in Computer Engineering
President's List 2019-2023
Faculty Scholarship Award Palmetto Fellows Scholarship

Work Experience

North Carolina State University **Raleigh, NC**
Graduate Research Assistant *January 2024-Present*

- Execute multimodal sensor data fusion, specializing in outlier identification and robust feature extraction to enhance data analysis accuracy
- Apply Python, R, and MATLAB machine learning and image processing libraries to develop and deploy scalable data analysis solutions

Cadence Design Systems **San Jose, CA**
WFO Application Engineer Intern *May-August 2023*

- Named as one of National Intern Day's Top 100 Interns
- Collaborated with cross-functional teams to develop and execute comprehensive test plans for advanced semiconductor designs
- Designed and implemented complex SystemVerilog testbenches using Cadence's Xcelium simulation tools
- Led formal verification efforts, ensuring coverage of design specifications and reducing the risk of functional errors
- Utilized Universal Verification Methodology (UVM) to improve verification efficiency and maintainability
- Analyzed simulation results and debugged issues, consistently meeting project milestones and deadlines
- Documented verification processes, test results, and issues to facilitate knowledge sharing and project continuity
- Presented two formal design reviews to management evaluating the progress, quality, and correctness of design verification efforts

Delta Air Lines **Atlanta, GA**
Simulator Engineer Co-op *Jan. 2021-July 2022*

- Edited and debugged C and FORTRAN programs implemented using real-time simulation on Unix-based platforms
- Ensured consistent training experience across simulator fleet by altering code on different host computers and operating systems

Relevant Courses

Neural Networks
Wearable Biosensors
Biometric Systems
Data Science
Applied Statistical Methods
Statistical Learning
Pattern Recognition
Computer Vision
Detection & Estimation
Embedded Computing
Random Signal Analysis
Electronics
Logic & Computing Devices
Computer Organization
Microcontroller Interfacing
Computer Networking
Operating Systems
Digital Computer Design
Integrated System Design
Linear Control Systems
Computer Ethics
Linear Algebra
Discrete Mathematics
Senior Design

Technical Skills

C/C++ ●●●●○
Python ●●●●○
MATLAB ●●●●○
FORTRAN ●●●●○
Visual Studio Code ●●●●○
Unix ●●●●○
Verilog ●●●●○
SystemVerilog ●●●●○
VHDL ●●●○○
UVM ●●●○○
Xcelium ●●●○○
R ●●●○○
Prolog ●●●○○
Ocaml ●●●○○
HTML ●●●○○
CSS ●●●○○
JavaScript ●●○○○

- Improved software efficiency to optimize simulator resources and increase simulator reliability
- Communicated with departments across company and government agencies to secure documentation for simulator modifications
- Researched and interpreted aircraft wiring schematics to debug simulation software and maintain data integrity
- Crafted technical reports detailing coded software modifications
- Partnered with pilots and instructors to identify and resolve simulator discrepancies to optimize pilot training
- Successfully on-boarded, trained, and mentored a new co-op student
- Initiated and scheduled monthly meetings with members of the engineering team and leadership
- Created a collaborative cross-divisional partnership between two engineering departments
- Worked with engineers from other companies to troubleshoot and implement software corrections

Clemson University **Clemson, SC**

Undergraduate Teaching Assistant *Aug.-Dec. 2020*

- Aided general engineering professor by answering questions and explaining material in class of 40+ students
- Tutored student individuals and groups using collaborative methods to provide support and strengthen understanding

Professional Skills

Technical Writing
Organizing Meetings
Mentoring/Tutoring
Project Management
Research & Analytics

Volunteer

Raleigh Senior Tech Ed
Pack Polish
IEEE-HKN
Clemson LIFE
Rotaract
Interact (President)

Leadership

Vice President - IEEE HKN Zeta Iota **2022-2023**

- Organized annual career fair for 100+ Electrical and Computer Engineering students and 12 companies totaling 20+ representatives
- Planned and led monthly meetings for 40+ members and weekly meetings for executive members
- Maintained attendance records and continuing requirements for each member
- Led department-wide Operation Christmas Child donation event
- Designed and distributed exclusive HKN Zeta Iota t-shirts

College of Computing, Engineering, and Applied Sciences **2022-2023**
Undergraduate Student Advisory Board Member

- Created a partnership between the college and Tigertown Graphics to design and sell custom CECAS t-shirts individualized for each major
- Developed outreach events for students in the college to enhance the undergraduate experience
- Provided feedback to the Dean's office on relevant issues to help guide or influence college-level decisions
- Attended bimonthly board meetings and represented the ECE department student body
- Communicated information about ECE department activities, policies, and processes with board members from other departments
- Distributed information to the ECE department's student body