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
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

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
- 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

Relevant Courses

Biometric Systems
Data Science
Pattern Recognition
Computer Vision
Embedded Computing
Random Signal Analysis
Electric Circuits
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 ●●●●○
GDB ●●●●○
Unix ●●●●○
Logisim ●●●●○
LTspice ●●●●○
Verilog ●●●●○
SystemVerilog ●●●●○
VHDL ●●●○○
UVM ●●●○○
Xcelium ●●●○○
Digital Works ●●●○○
R ●●●○○
Prolog ●●●○○
Ocaml ●●●○○
HTML ●●●○○
CSS ●●●○○
JavaScript ●●○○○

- 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

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