Emily Herbert

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Education

2021 **MS in Computer Science**, *The University of Massachusetts Amherst*, Amherst, MA.

2018 **BS in Computer Science**, *Trinity University*, San Antonio, TX.

Skills

Languages, Proficient: Rust, Scala, JavaScript, TypeScript, Python, OCaml, C++
Familiar: Haskell, Idris, C, C#, R, Java, Greenfoot, ScalaFX, JavaFX.

Tools, Kubernetes, Docker, OpenWhisk, Google Cloud Platform, Unity, Helm, Sbt, Yarn, Cargo .

Systems, Apache Spark, CouchDB .

Specialties, Serverless Computing, Cloud Computing, Language Development, Compiler Development, Software Development, Game Development, Distributed Computing, Object Oriented Programming, Functional Programming, Software Design, System Design .

Relevant Experience

May 2019 - Jan 2021 **PLASMA Lab**, *University of Massachusetts Amherst*.
Researcher
Programming Languages and Systems at Massachusetts lab (PLASMA), advised by Prof. Arjun Guha. Researching programming language and systems tools for serverless computing.
plasma-umass.org

Talks & Publications.

Emily Herbert and Arjun Guha. A Language-based Serverless Function Accelerator. 2020. [preprint, repo]

Emily Herbert. A Language-based Serverless Function Accelerator. *Cornell CAPRA Lab.* 2020. [slides]

June 2018 - May 2019 **DREAM Lab**, *University of Massachusetts Amherst*.
Researcher
Data systems Research for Exploration, Analytics, and Modeling lab (DREAM), advised by Prof. Peter Haas. Researching deep learning methods for simulation input modeling.
dbgroup.cs.umass.edu

Talks & Publications.

Wang Cen, Emily A. Herbert, and Peter J. Haas. NIM: Modeling and Generation of Simulation Inputs via Generative Neural Networks. *Winter Simulation Conference.* 2020. [paper] **Best Contributed Theoretical Paper Finalist**

Emily A Herbert. NIM: Generative Neural Networks for Simulation Input Modeling. *SCS Summer Simulation Conference.* 2019. [slides]

Emily A Herbert, Wang Cen, and Peter J Haas. NIM: Generative Neural Networks for Simulation Input Modeling. *Summer Simulation Conference.* 2019. [short paper]

June 2017 – Aug 2017 **National Aeronautics and Space Administration (NASA)**, *Langley, VA*.
NASA Internships, Fellowships, and Scholarships (NIFS) Intern
Contributed to the NASA Safeguard autonomous drone geofencing project. Designed and implemented system for on-board flight control of GPS devices. Refactored code from previous NASA flight missions to meet current mission standards.

June 2016 – Aug 2016 **General Electric (GE), Oil & Gas**, *Billerica, MA*.
Information Technology Leadership Program (ITLP) Intern
Created asset tracking system for shop floor using RFID, Bluetooth LE, and Raspberry Pi. Worked with the SAP enterprise resource management software to automate EHSM compliance checks.

Relevant Coursework

Completed at University of Massachusetts Amherst.
Programming Languages, Systems, Research Methods, Algorithms, Artificial Intelligence, Game Programming, Networking

Completed at Trinity University.
Programming Languages, Operating Systems, Big Data and Machine Learning, Software Engineering, Principles of Functional Languages, Theoretical Computer Science, Principles of Computer Design, Data Abstraction, Game Theory, Discrete Data Structures