

CONTACT

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SKILLS

Concurrent Data Structures	5+ yrs
High Performance Computing	4+ yrs
Program Analysis	1+ yrs
C++	6+ yrs
Python	5+ yrs
Java	3+ yrs
JavaScript	2+ yrs
C#	1+ yrs
SQL	1+ yrs

KENNETH LAMAR

Post Doctoral Scholar - Computer Science

EDUCATION

Doctor of Philosophy - Computer Science University of Central Florida - Orlando, FL (USA)	2018 - 2024
Master of Science - Computer Science University of Central Florida - Orlando, FL (USA) Masters along the way	2018 - 2023
Bachelor of Science - Computer Science University of Central Florida - Orlando, FL (USA) Minor in Mathematics	2014 - 2017
Associate of Arts Daytona State College - Daytona Beach, FL (USA)	2011 - 2015

WORK EXPERIENCE

Post Doctoral Scholar University of Central Florida - Orlando, FL (USA) Continuing graduate research projects and training new graduate students	2024 - Present
Computing Graduate Student Intern Lawrence Livermore National Laboratory - Livermore, CA (USA) Evaluated code quality metrics to improve maintainability using ROSE LCOM Tools to measure class cohesion and a tool to measure code churn. Tools: C++, Python, Ada, ROSE compiler, git churn, gprof, static analysis	Summer 2023
Applications Developer Internship MVP Sports Clubs - Orlando, FL (USA) Developed customer touchpoint system, guest check-in alert, customer risk factor identification, iOS and Android apps, and API integrations. Tools: ASP.NET, SQL, C#, JavaScript, Java, Swift	2017
Earth Team Volunteer US National Resources Conservation Service - DeLand, FL (USA) Assisted in ArcGIS mapping.	2014

PUBLICATIONS

Evaluating HPC Job Run Time Predictions Using Application Input Parameters 17th ACM International Conference on Distributed and Event-Based Systems, June 2023	DEBS 2023
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Metrics for Packing Efficiency and Fairness of HPC Cluster Batch Job Scheduling

SBAC-PAD 2022

IEEE 34th International Symposium on Computer Architecture and High Performance Computing, November 2022

Secondary author

Backfilling HPC Jobs with a Multimodal-Aware Predictor

HPCMASPA 2021

Workshop on Monitoring and Analysis for HPC Systems Plus Applications, September 2021

Co-located with CLUSTER

PMap: A Non-volatile Lock-free Hash Map with Open Addressing

NVMSA 2021

2021 IEEE 10th Non-Volatile Memory Systems and Applications Symposium, August 2021

Lock-free transactional vector

PMAM 2020

11th International Workshop on Programming Models and Applications for Multicores and Manycores, February 2020

Co-located with PPOPP

An Efficient Latch-free Database Index Based on Multi-dimensional Lists

IPCCC 2018

37th IEEE International Performance Computing and Communications Conference, November 2018

PRESENTATIONS

Tilt-Shift Rendering Using a Thin Lens Model

Apr 2022

Student Presentation - UCF - Orlando, FL (USA)

Provided an explanation of and developed an interactive web demo fully simulating a tilt-shift lens using real-time ray tracing.

Tools: TWGL, D3.js, reveal.js, WebGL shaders

A Persistent Hash Map for Graph Processing Workloads and a Methodology for Persistent Transactional Data Structures

Sep 2021

CppCon 2021 - Aurora, CO (USA)

Presented my work on PMap, a persistent hash map design.

RacerD: Compositional Static Race Detection

Apr 2020

Student Presentation - UCF - Orlando, FL (USA)

Presented on RacerD, a static analysis tool to detect data races, designed by Facebook. Ran on four popular Android apps and 9 toy programs and identified several potential and real data races.

Tools: RacerD

PROJECTS

CONVUL Reimplementation

Apr 2021

Tools: Intel PIN, C++, CONVUL

Recreated CONVUL, a concurrency vulnerability detector using dynamic analysis, as a student project, since the original design did not have source code available.

24-Player Mario Kart Split Screen Multiplayer

2017 - 2025

Tools: WinAPI, libusb, ViGEM, Batch scripting, Dolphin, VMWare, dnsmasq

Multi-instance workflow and tooling for massively multiplayer splitscreen. Wrote a custom controller driver, a window tiling tool, and documentation for setup and usage. Supports many other games too.

UCF Garage Tracker

2020

Tools: Node.JS, Oracle Cloud

Capture and log UCF parking data over time.

TEACHING

Graduate Teaching Assistant

Spring 2021

COP 3402 - Systems Software - UCF

Instructor: Euripides Montagne

Graduate Teaching Assistant

Spring 2020

COP 4520 - Multicore Programming - UCF

Instructor: Damian Dechev

Graduate Teaching Assistant

Fall 2019

CAP 4102 - Web Design and User Experience - UCF

Instructor: Reza Aria

Graduate Teaching Assistant

Spring 2019

CIS 3360 - Security in Computing - UCF

Instructor: Joshua Lazar

Graduate Teaching Assistant

Fall 2018

CIS 3360 - Security in Computing - UCF

Instructor: Michael McAlpin

AWARDS

- 2018 UCF College of Graduate Studies Presentation Fellowship
- President's List - Daytona State College - 7 times between 2011-2015
- General Research Award - Daytona State College Awards Convocation 2011 - First place award, general research paper