

Andrew Rodriguez

SOFTWARE ENGINEER · GRADUATE RESEARCHER

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Education

University of Texas Rio Grande Valley

MASTERS IN COMPUTER SCIENCE

GPA 3.33

Edinburg, Texas

August 2021 - May 2023

University of Texas at Austin

B.S. IN COMPUTER SCIENCE

GPA 3.22

Austin, Texas

August 2017 - May 2021

Experience

InvoiceCloud

SOFTWARE ENGINEER

- Performing responsibilities of resolving issues of complex code to enable our products to perform as expected
- Recording issues and resolutions to improve internal documentation
- Tracking issues and preparing histories to solve product development issues

Brownsville, Texas

January 2021

Algorithmic Self-Assembly Research Group (ASARG)

GRADUATE RESEARCHER

- Conducting research in algorithmic self-assembly, or the process in which a disordered system of pre-existing components forms an organized structure or pattern

Edinburg, Texas

August 2021

University of Texas at Austin Department of Computer Science

TEACHING ASSISTANT

- Conducted class to reinforce the professor's instruction
- Administered help hours to assist the students with their assignments

Austin, Texas

August 2018 - May 2021

Projects

AutoTile

TILE AUTOMATA SIMULATOR

Software created to assist in self-assembly research, written in Python.

Pascal Compiler

WRITTEN USING C, LEX, AND YACC

A Pascal Compiler that implements most of the language features. Includes the lexical analyzer, parser, and code generator.

Find My Tune

MUSIC CURATION IOS APP

iOS App that shares more of Spotify's API with the user, giving them more power and control over the user's music. Integrates with the user's Spotify account to keep music recommendations and playlists synced on both applications.

PintOS

OPERATING SYSTEM WRITTEN IN C

Expanded on a toy OS to include priority scheduling, argument passing on the stack, system calls for user programs, virtual memory, and a multi-level indexed file system.

JOS-On-JOS Para-Virtual Hypervisor

HYPERVISOR WRITTEN IN C

Designed a hypervisor that ran JOS as a guest on top of a JOS host. Implemented Guest OS bootstrapping, extended page tables, and hyper calls.

Publications

Building Squares with Optimal State Complexity in Restricted Active Self-Assembly

ROBERT M. ALANIZ, DAVID CABALLERO, SONYA C. CIRLOS, TIMOTHY GOMEZ, ELISE GRIZZELL, ANDREW RODRIGUEZ, ET AL.

SAND '22