

Ana Segebre Salazar

SOFTWARE ENGINEER

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Education

Grinnell College

B.A. IN COMPUTER SCIENCE AND FRENCH

Grinnell, IA

Aug. 2015 - May 2019

- Cumulative GPA: 3.42 / 4.00
- Relevant Coursework: Team Software Development | Operating Systems and Parallel Algorithms | Analysis of Algorithms | Automata, Formal Languages, and Computational Complexity | Object-Oriented Problem Solving, Data Structures, and Algorithms | Computer Organization and Architecture | Computer and Network Security

Experience

Mayflower Homes, Inc.

BACK-END WEB DEVELOPER

Grinnell, IA

Aug. 2017 - Dec. 2017

- Engineered Ruby on Rails web application to connect local retirement community through advanced search algorithms and profile networking, working in Agile/Scrum environment for rapid customer-driven development
- Executed deployments through Heroku, resulting in reliable build, test, and release processes
- Developed robust test coverage (Cucumber) to run integration tests in behavior-driven development (BDD) style

Grinnell College Department of Computer Science

COMPUTER SCIENCE RESEARCHER

Grinnell, IA

May 2017 - Dec. 2017

- Developed dynamic LLVM system to improve program performance by monitoring and minimizing cache misses in C/C++ programs during runtime, resulting in average performance boost of 9% for SPEC benchmarks
- Designed and implemented memory re-allocation algorithm based on both memory pages and blocks
- Led Agile/Scrum team of 4 with weekly sprints and retrospectives, including bi-weekly research presentations

Projects

Dynamic Memory Allocator

Feb. 2019

- Built custom implementation of `malloc` and `free` functions from the C library to dynamically allocate memory with the functions `mmap` and `mremap`, to specify the location and size of requested memory
- Developed portable memory management service by creating custom 16-byte alignment protocol

P2P Chat Exchange

Apr. 2019

- Created distributed, peer-to-peer chat program to exchange messages between clients without a central server
- Engineered partition algorithm using multithreading for efficient workloads, maintaining consistency regardless of network structure

Distributed Snake

May 2019

- Implemented distributed multiplayer snake game with a round robin scheduler to render game board and read players' moves, synchronizing threads to ensure fluid gameplay

Skills

Programming Languages

Java, C, Ruby (Rails), C++, Python, Scheme, OCaml, MIPS Assembly

Tools/Practices

AWS Cloud, Agile/Scrum, VCS (Git), DevOps (CI/CD/Heroku), BDD (Behavior-driven development), TDD (Test-driven development), OOP (Object-oriented programming)

Languages

English (native), Spanish (native), French (fluent)

Organizations

Student Organization of Latinxs (Co-Leader), Society for the Advancement of Hispanics/Chicanos and Native Americans in the Sciences (Publicity Coordinator), Grinnell College International Student Organization (Social Coordinator)