Nicolas Barrios

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PROJECTS

INSPECTRE | Feb. 2020 - May 2020

Course Project for Software Engineering

- Applied Agile methodologies to develop a Flutter/Dart-based visual novel game for Android platforms
- Developed continuous integration and continuous deployment pipelines
- Established UI consistency and style guidelines for the project
- `https://github.com/cse442-spring-2020-offering/cse442-semester-project-bugs-are-features`

LANGUAGE INTERPRETER | Mar. 2020 - May 2020

Course Project for Programming Languages

- Built an interpreter for a small, OCaml-like, stackbased bytecode language
- Implemented scoping, function declarations and calls, as well as first-class functions

DYNAMIC MEMORY ALLOCATOR | Apr. 2019 - May 2019

Course Project for Systems Programming

- Implemented a dynamic memory allocator suitable for replacing malloc() for heap memory in a Unix process.
- Developed custom malloc using a multi-pool allocation scheme

DIGITAL CODENAMES | Jan. 2018 - May 2018

Course Project for Intro to CS II

- Recreated the **Codenames** board game with our growing knowledge of Java.
- Developed event handling system using object-oriented project structures.
- `https://github.com/nbarrios1337/Codenames_in_Java`

WORK EXPERIENCE

TEACHING ASSISTANT | CSE 220 - Systems Programming

Aug. 2019 – Present | Buffalo, NY

- Collaborating with professors and fellow teaching assistants to reinforce course materials.
- Hosting lab sessions where students developed course-relevant programs.
- Hosting additional after-hours sessions where students could lead course-adjacent Linux and C programming knowledge.

OUTREACH AND TECHNOLOGY LEAD |

Artificial Intelligence Institute

Mar. 2019 – Dec. 2019 | Buffalo, NY

- Managing social media outlets (i.e. Twitter, LinkedIn, website) of the institute by publishing and maintaining content.
- Analysed data for an improved, AI-based, cross-publication reference tool for researchers.

EDUCATION

UNIVERSITY AT BUFFALO

BS/MS in Computer Science
Expected 2022 | Buffalo, NY
School of Engineering & Applied Sciences
Undergraduate GPA: 3.78 / 4.0
Graduate GPA: 4.0 / 4.0
Presidential Scholar

SKILLS

PROGRAMMING

3+ years:
C • C++ • Python • Bash
1+ years:
Android • Java • LaTeX
0+ years:
MIPS Assembly • OCaml • HTML • CSS

TECHNOLOGY

Git/Github • Travis CI/CD •
UNIX/Linux •
SLURM • OpenMP •
OpenMPI • Apache Spark

COURSEWORK

GRADUATE

Operating Systems
Algorithms for Modern Computing Systems
Intro. to Parallel & Distributed Processing
Modern Networking Concepts

UNDERGRADUATE

Intro. to Computer Science 1 & 2
Discrete Structures
Data Structures
Systems Programming ***(Teaching Asst.)***
Intro. to Human-Computer Interaction
Algorithms & Complexity
Computer Organization
Programming Languages

LINKS

Github://**nbarrios1337**
LinkedIn://**nbarrios1337**
Twitter://**@nbarrios1337**
Keybase://**nbarrios**