Wode "Nimo" Ni

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EDUCATION

COLUMBIA UNIVERSITY
B.S. in Computer Science
2016.09 - present
New York, NY
Major GPA: 4.0
Cum. GPA: 3.94
Vision, Graphics Track
Tau Beta Pi
Dean's list

DICKINSON COLLEGE
B.S. in Computer Science
2013.09 - 2016.05
Carlisle, PA
Major GPA: 4.0
Cum. GPA: 3.93
Departmental Honor
Summa cum laude
Dean's list
John Montgomery Scholarship
Pi Mu Epsilon
Upsilon Pi Epsilon
Alpha Lambda Delta

COURSEWORK

Compiler
Computer Graphics
Computer Vision
Robotics
Artificial Intelligence
Operating Systems
Database Systems
Computer Networks
Programming Languages
Theory of Computation
Computer Architecture
Data Structures

SKILLS

PROGRAMMING
Java • C • C++ • Haskell
OCaml • SQL • Python
LaTeX • Scheme • Common Lisp

TOOLS
Git/GitHub • Unix • Vim
Eclipse • XCode • Visual Studio
Android Studio • Make/CMake

LINKS

Github:// **wodeni**
LinkedIn:// **wode-ni**

RESEARCH

PENROSE | Research at Carnegie Mellon University
May 2017 - August 2017 | Pittsburgh, PA
Penrose is a system that automatically visualizes mathematics. The system, comprised of two domain-specific languages , allows users to create professional diagrams by simply typing mathematical notations. I designed and implemented the Style language, and extended the Substance language to support functions and logically quantified statements. The work was presented at DSLDI 2017, co-located with SPLASH 2017. (Co-advised by Jonathan Aldrich, Keenan Crane, Joshua Sunshine, and Katherine Ye)

CYBER AFFORDANCE VISUALIZATION IN AUGMENTED REALITY (CAVIAR) | Research at Columbia University
Jan 2017 - May 2017 | New York, NY
Supervised by prof. Steven Feiner, I participated in the CAVIAR project, in which we built an AR application that visualizes cyber affordance in indoor and outdoor environments. Learned Unity and Hololens development and investigated the construction of 3D models from GIS data.

WHITEBOARD SCANNING USING SUPER-RESOLUTION | Honors Thesis
May 2016 | Carlisle, PA
Supervised by Prof John MacCormick(Advisor), Prof Timothy Wahls, and Prof Grant Braught, I studied an application of a super-resolution algorithm: to compute a clear, scanned output given a low-quality video of a whiteboard. The work was presented on CCSCNE 2016 conference.

PROJECTS

MATRIX PROCESSING LANGUAGE | Designing a new programming language
Designed and implemented a new domain specific language that focuses on matrix computations. Using MPL, we bulit a simulation of Conway's Game of Life in less than 30 lines.

RAYTRA | A ray tracer from scratch
Implemented a ray tracer from scratch. This renderer employs Monte-Carlo ray tracing and scene-wide acceleration using BVH-tree. The output images have Blinn-Phong shading, reflections, refraction, and soft shadows.

WORK

COLUMBIA UNIVERISTY COMPUTER SCIENCE DEPARTMENT | Teaching Assistant
September 2017 – Current | New York, NY
TA for COMS 4115: Programming Languages and Translators, taught by prof. Stephen Edwards.

DICKINSON COLLEGE COMPUTER SCIENCE DEPARTMENT | Teaching Assistant and Lab Consultant
September 2014 – May 2016 | Carlisle, PA
TA for Introduction to Java II with Prof. Timothy Wahls during Spring 2016 Semester. Held evening help room sessions to assist students with homework and projects.