Andrew Nolte

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EDUCATION

UT AUSTIN

BS in Computer Science
Turing Scholars Honors Program
May 2022 | Austin, TX
College of Natural Sciences
Cum. GPA: 3.62 / 4.0
Major GPA: 3.86 / 4.0

LINKS

Github:// **AndrewNolte**
LinkedIn:// **andrew-nolte**
Website:// **andrewnolte.github.io**

COURSEWORK

FIRST SEMESTER

Data Structures (Honors)
Discrete Math (Honors)

SECOND SEMESTER

Computer Architecture (Honors)
Intro to CS Research (Honors)
Freshman Research Initiative: Robotics

MISC. PROJECTS

Image Manipulation
Critters (interpreter)
Treaps Implementation
Boggle
Tamuhack 2019: Carma
Partial ARM Emulator

SKILLS

PROGRAMMING

Over 5000 lines:
Java • C++ • Robot Programming • Python
Over 1000 lines:
C • Web Stack • React.js
Familiar:
React Native • SQL

EXPERIENCE

CHEGG TUTORS | Tutor

May 2018 – Dec 2018 | Spring, TX

- Tutored mainly college students in math and computer science
- Conducted UX interview with researchers, pointed out bugs and suggested changes

MATHNASIUM | Tutor

Jan 2018 – Aug 2018 | Spring, TX

- Tutored students aged 5-17 in math, worked with student database

PROJECTS

WEBCRAWLER AND QUERY ENGINE Dec 2018

Crawled and efficiently indexed a web, made query engine using shunting yard algorithm

TETRIS, TETRIS AI Oct 2018

Wrote Tetris and Tetris AI using genetic algorithm in Java

TEXT REPLICATOR Sep 2018

Created natural language replicator using Markov Chain algorithm

ROBOT PROGRAMMING FOR TEXAS AERIAL ROBOTICS 2018-Present

ROS (Robot Operating System), Ardupilot, Linux, Gazebo, C++

PERSONAL WEBSITE Spring 2018

Used Google's Materialize CSS classes to create aesthetically pleasing website that displays graphs from math and physics, as well as projects

MOTION PLANNER APPLICATION Fall 2018

Used processing, an extension of Java, to create application for planning paths for the robot to take, then printing out generated coordinates to be used in robot code. Uses line and bezier curves, overlayed on an image of the game field.

ROBOT PROGRAMMING FOR FRC ROBOTICS, PROGRAMMING CAPTAIN 2016-2018

Computer vision with OpenCV: made filters to identify x and y coordinates for objects, sorted based on apparent distance, and used coordinates to guide robot autonomously
Autonomous path planning/Control theory: planned paths using multiple curve and PID techniques, trapezoidal and sinusoidal motion plans

HONORS / ACTIVITIES

2018-	Texas Aerial Robotics
2018-	Association for Computing Machinery
2016-2018	Vortx 3735 (Klein ISD Robotics Team), Programming Captain Lead a group of programmers in developing robot code for FRC team
2010-2018	Boy Scouts of America, **Eagle Scout** with bronze palm
2015-2018	Zeta Omicron (High School CS honor society) Placed in various UIL CS competitions, 8th in HP CodeWars 2017