Andrew Nolte

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EDUCATION

UT AUSTIN

B.S. in Computer Science
Turing Scholars Honors Program
May 2022
Major GPA: 3.85 / 4.0
Overall GPA: 3.8 / 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

SUMMER

Stanford Online Machine Learning

MISC. PROJECTS

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

SKILLS

PROGRAMMING

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

PROJECTS

HACKDFW 2019: SYNTYPE Feb 2019

Built recurrent neural network in Python to identify difficult keystroke patterns from user keyboard input in real time.
Scraped and parsed online Java repos to generate random Java templates for difficult patterns to be inserted, all delivered on frontend done in React.js

WEBCRAWLER AND QUERY ENGINE Dec 2018

Crawled and efficiently indexed a web into a custom data structure.
Made query engine using shunting yard algorithm, supporting complex boolean logic queries.

TETRIS, TETRIS AI Oct 2018

Programmed Tetris game and Tetris AI in Java, trained using genetic algorithm.
Used random vectors and vector combination to generate local dominant species that asymptotically approached their maximum potential.

MOTION PLANNER APPLICATION Fall 2018

Used processing to create customizable application for planning robot paths.

ROBOT PROGRAMMING FOR FRC ROBOTICS, PROGRAMMING CAPTAIN 2016-2018

Used OpenCV to identify multiple objects and guide the robot autonomously.
Programmed autonomous path planning using multiple curve and PID techniques, trapezoidal and sinusoidal motion plans

EXPERIENCE

APPLIED RESEARCH LABORATORIES | Software Developer Intern

June 2019 – Present | Austin, TX

Harvey Damage Assessment

- Created machine learning pipeline for classifying satellite tiles
- Created unique application for tile-labelling to speed up data processing

Underwater Robot

- Refactored code base into a clean, intuitive structure
- Made OpenCV image filters and tracking algorithm
- Interfacing code with custom simulator for testing

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

HONORS / ACTIVITIES

2018-	Turing Scholars Student Association
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