Andrew Nolte

Austin, Texas
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EDUCATION

UT AUSTIN
B.S. in Computer Science
Turing Scholar
(CS Honors)
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

Taken
Data Structures (Honors)
Discrete Math (Honors)
Computer Architecture (Honors)
Intro to CS Research (Honors)
Freshman Research Initiative
Stanford Online Machine Learning
Currently Taking
Operating Systems (Honors)
Differential Equations

MISC. PROJECTS

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

SKILLS

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

EXPERIENCE

APPLIED RESEARCH LABORATORIES June 2019 – Present | Austin, TX
Software Engineering Intern
Harvey Damage Assessment

- Made machine learning pipeline that was able to classify tiles with 94% accuracy using a Convolutional Neural Network
- Created unique application that speeds up manual tile labelling, resulting in thousands of labelled images within hours.

Underwater Robot

- Refactored portion of code base into a clean, intuitive structure, improving clarity and development speed.
- Produced OpenCV solution for an unsolved tracking problem.
- Linked up code with accurate simulator, greatly increasing development speed.

PROJECTS

FPGA FLIGHT CONTROLLER May 2019
Part of a small team that wrote flight control code in verilog, including PID Control, Motor Mixing, and communication protocols, resulting in a flyable FPV drone.

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 repositories to generate random Java templates for RNN to use, all delivered on front-end 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. (Essentially made Google Search clone)

TETRIS, TETRIS AI Oct 2018
Programmed Tetris game and Tetris AI in Java, trained using genetic algorithm. The final algorithm is able to clear millions of lines.

MOTION PLANNER APPLICATION Fall 2017
Made open source path planning application for robotics, speeding up autonomous development for multiple teams.

HONORS / ACTIVITIES

2018-	Turing Scholars Student Association
2018-	Association for Computing Machinery
2016-2018	Vortx 3735 (Klein ISD Robotics Team), Programming Captain
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