

Joseph Ryan

📞 919 924 4887 • ✉ JoesphRyan@utexas.edu • 🌐 JosephRyan.me
in Joseph-B-Ryan • 🔄 P1n3appl3

Experience

- **FIRST Robotics - Team Lead/Head Programmer** *August 2015–June 2017*
 - Directed 10 developers on multiple software projects
 - Managed long term projects as an elected board member
 - Used version control, continuous integration, and unit testing with multiple languages
 - Integrated libraries such as OpenCV for autonomous vision tracking
- **STEM Summer Camp - Teacher and Counselor** *July 2016 - August 2017*
 - Mentored elementary and middle school students during week long courses
 - Taught basic circuitry, microcontroller programming (Arduino-C++), Android development (Android Studio-Java), robotics (C++), and object oriented programming (Python)

Projects

- **Genetically Evolving Neural Network** **C++, Python**
 - Implemented a machine learning solution for real time, continuous, controllers
 - Used a blend of neural networks and genetic algorithms for competitive training
- **The Elements of Computing Systems** **HDL, ASM, Jack, Python**
 - Completed online course on computer architecture, assembly, and compilers
 - Course projects included implementing a CPU simulated in HDL, an operating system, a compiler, a virtual machine translator, and an assembler
- **Handwritten Character Recognition** **Python**
 - Wrote a machine learning digit classifier using a weighted kNN algorithm
 - Increased accuracy of recognition to 98% while maintaining high performance

Education

- **University of Texas at Austin - Cockrell School of Engineering** **Austin TX**
Pursuing BE in Electrical and Computer Engineering *2017–2021*
- **William G. Enloe High School** **Raleigh NC**
AP Scholar with Distinction *2013–2017*

Technical Skills

- **Programming Languages:** Proficient in Python, C++, and Java
- **Other:** Proficient in Git, Markdown, JUnit, and Arduino
Basic ability in OpenCV, CMake, Gradle, Linux, and \LaTeX