FEILAN JIANG

Versatile software-oriented maker

Goal-oriented problem solver

Inquisitive multidisciplinary learner

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QUALIFICATIONS

Software

C, C++, Python, Java, JavaScript, HTML, CSS

OpenCV, ncurses, Kivy, Plotly, Tkinter, Swing, JavaFX, jQuery, AngularJS, Node.js, Express.js

Git, GitHub, BitBucket

Proficient with Linux and Bash commands

Mechanical

AutoCAD, SOLIDWORKS

General machining

Robotics

Arduino, Raspberry Pi

Common sensors, PID loops, finite state machines

EDUCATION

BASc Mechatronics Engineering, University of Waterloo

EXPERIENCE

Software Developer
Nanometrics Inc.
1/2017-4/2017

- Devised an SD card wear rate testing methodology involving SMART data and standard SD controller commands
- Optimized performance on Linux-based seismometers by fine-tuning JVM memory consumption
- Automated cross-compilation of internal software tools using the Autotools suite

Programming Lead
FRC Team 4783
9/2015-5/2016

- Mentored inexperienced younger students on the fundamentals of WPILib robotics programming in C++
- Coordinated team logistics with other department leads to ensure the robot was competition-ready

PROJECTS & ACTIVITIES

Fog-screen Hologram
Collaborative Project
1/2017-present

- Goal is to produce a low-cost, hyper-realistic volumetric display with applications in augmented reality, CAD, etc.
- Has a rotating aluminum base, internal reservoir, and ultrasonic mist maker; electrical connections to stepper motors are preserved using a waterproofed slip ring
- Currently working on displaying pre-rendered 3D scenes in a Tkinter GUI, as well as updating the viewing perspective in real-time by using OpenCV to track changes in the observer's position

Robotics
UW Robotics Team
9/2016-present

- Currently designing LIDAR and SoC mounts in SOLID-WORKS and machining them for the Robot Racing competition
- Oversaw the creation of an Arduino-powered, line-following robot that used photoresistors to detect the line shade and play the corresponding musical note

Mobile Game Dev
Independent Project
6/2014-6/2015

- Conceptualized, implemented, and published a cross-platform, colour-based puzzle game designed to please the eye and stimulate the mind
- App won top prize for game design and technical sophistication at the 2015 TechU.me AppJam finals in Ottawa