Neesarg Patel

Work Experience

toolscience
C++ Software Developer
Slide 3D Team
Sept. 2016 – Dec. 2016

- Implemented non-linear search algorithms such as Particle Swarm and Cuckoo Search in C++ to find weak surfaces for use in Civil Engineering CAD tools
- Used multithreading techniques in C++ to Parallelize search algorithms which decreased typical search runtimes by 8%
- Increased accuracy of algorithm by implementing non-uniform rational B-splines (NURBS) to mathematically model arbitrary 3-dimensional surfaces

Honeywell
Software Developer
Research & Development
Jan. 2016 – Apr. 2016

- Created Computer Aided Design software for one-click rendering of 2-dimensional CAD models of multiplexers based on design specifications provided by engineers
- Developed and implemented a recursive algorithm to create the most space efficient radio frequency multiplexer design
- Algorithmically generated radio frequency channel gain plots used by engineers to create RF filters and multiplexers for the aerospace industry

Texas Instruments
Software Developer
Advanced Tooling Team
May 2015 – Aug. 2015

- Implemented many features for Texas Instruments Code Composer Studios IDE while employing Test Driven Development techniques using Java and Junit
- Created and automated build and test jobs to run nightly using Selenium, Apache ANT, Jenkins and BASH-Scripting
- Contributed greatly to Texas Instruments Cloud Tools Suite using Express, AngularJS, and Node.js

Side Projects

Watanomous SAE AutoDrive™ Challenge
Chevrolet Bolt
Team of 4 students

- Building object classification system using machine learning techniques for autonomous vehicle operation
- Will be able to detect road signs, obstacles and lane markings from data gathered by cameras and sensors

TrafficTime
Android Application

- A commute analysis Android Application that tracks statistics of your daily trips
- Calculates trip details and trends including average speed, duration, distance, top speed and time saved by speeding

IoT Security System
TI CC3200 IoT
Mictrocontroller +
Android User Interface

- Sends door and window sensor events from microcontroller to Android application over WiFi connection through UDP
- Audible prompts are used to allow user to arm and disarm the system using Android application

Contact

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Skills Summary

Proficient in:

Java ○ C++ ○ C#
MySQL ○ Thrift
Verilog ○ Linux ○ Tcl

Familiar with:

ARM & MIPS Assembly ○ C
VHDL ○ JavaScript ○ PHP

Experience with:

Junit ○ Selenium ○ BASH
ANT ○ Jenkins ○ Express
AngularJS ○ Android
Arduino ○ TI Energia

Platforms & Tools:

Git ○ Eclipse ○ Vim
Android Studios ○ MatLab

Education

University of Waterloo

Candidate for B.A.Sc
Computer Engineering
2013 – 2018

Relevant courses:

Distributed Systems
Computer Architecture
Databases ○ Computer Security

Interests and Hobbies:

Reading about new technologies
Urban exploration
Table-Tennis