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Rachit Shrivastava

EDUCATION

North Carolina State University
M.S., Computer Science
Expected May 2018 | Raleigh, NC
GPA: 3.83/4

VIT University
B.Tech, Computer Science & Engg.
May 2013 | Vellore, India
GPA: 8.96/10

LINKS

Github:// rachit491
LinkedIn:// rachit-shrivastava

INTEREST AREAS

Full-Stack Development, Software Engineering, Front-End Development

TECHNICAL SKILLS

Languages
C++, Java, Python, C (Linux Kernel)

Web Technologies
HTML5/CSS3, jQuery, PHP, JavaScript, TypeScript, WebGL, p5, ReactJS, NodeJS, AngularJS, three.js, createJS, REST API

Databases
Oracle11, MySQL, SimpleDB

OS
Linux, Unix, Windows, OSX

Project Tools
SVN, Git, JIRA, Rally, TestTrack

WORK EXPERIENCE

Nokia | *Software Development Co-op*
June 2017 – present | Raleigh, NC
1. Performed Integration & Unit Testing maintaining communication through backend on Opencord's open-source vOLTHA's Passive Optical Network (PON) Adapter: *Python, C++*
2. Reconcile mechanism for SDAN Controller for PON Configuration devices: *C++*
3. Working on Remote-Debug features for ONTs: *C, Linux Kernel, Docker, Jenkins*

Bally Technologies (now Scientific Games Inc.) | *Software Engineer*
October 2013 – May 2016 | Bangalore, India
1. Worked on the Bally Mobile Game Framework level to create sound modules, communications to server: *JavaScript, nodeJS, MVC, REST APIs*
2. Learned the functionality of new GDK, by developing Monopoly game, for both client, server framework & communication between them: *TypeScript, box2D, C++*
3. Trained developers from teams in Bangalore, Chennai & Pune about the new GDK, awarded 'Employee of the Month – Aug15'
4. Worked for the resource & animation optimizations for new GDK using JS libraries. Successfully integrated createJS to GDK: *createJS, three.js, Phaser, TypeScript, ReactJS*

RESEARCH

Masters' Thesis | August 2017 – present
Structuring Human-ML Interaction with an Immersive Interface based on Qualitative Coding. Designing an interactive UI for IBM Watson ML Training module to ease in the ML Training problem. Presented a Poster at IEEE VIS Oct'2017, Phoenix, Arizona

Visual Experience Lab, NCSU | January 2017 – present
Analyzing the experience of people with the NVIDIA graphics technologies G-SYNC, V-SYNC based on the factors like cost, performance, hardware, etc. and evaluating best suitable technology, G-SYNC or any other: *UX, IAT*

Institute for Emerging Issues, NCSU | April – August 2017
Prototyping the existing IEI Commons display software from static content to customizable one for better display: *JavaScript, p5, createJS, ReactJS, MV**

Aeronautical Development Establishment, Bangalore | January – April 2013
Analyzed graphically, comparisons between flight simulation results and MATLAB Simulink model data to detect anomalies in parameters for Tejas Aircraft: *Ada, MATLAB*

PROJECTS

Multiplayer Networked Game Engine. Designed & developed a multi-threaded networked multiplayer game engine server using Chandy-Misra-Bryant Algorithm for event synchronization. Developed Pong and Space Invaders with it: *Java, Processing*
AI Bot for Scotland Yard Board Game. Developed AI bots for Mr X and detectives using Greedy Algorithm and Monte Carlo Tree Search. Analyzed the performances with different test scenarios, to get human-like-AI for good experience: *Java, Processing*
NonPersistent-Heap. Implemented mmap module that user-space library uses to request the mapping of kernel space memory into the user-space memory in the form of a perishable heap memory for multi-processor architecture: *C, Linux Kernel*
Transactional-NPHeap. Implemented transactional kernel memory module for concurrency management: *C, Linux Kernel*
Course Assessment System. Designed a DB for course assessment system like Gradience architecture: *Oracle11, Java, JDBC, ER-Modelling*
3D Frogger. 3D version of Konami classic Arcade Game Frogger, with a first-person view: *JavaScript, three.js, WebGL*
Demoreel. Created a demo-reel of landscape demonstrating graphics techniques - LoDs, Terrains, Reflections, Global Illumination, Particle Effects: *Unreal Engine 4*
Future of Presentation. Identified current limitations & outdated practices with existing form of ppts & analyzed as to why they are ineffective: *JavaScript, SlidesAPI*
LeapNLearn. Made an interactive word jumble which responds to gestures and voice commands at HackDuke 2017, using *Leap Motion Controller, Microsoft Speech Recognition API, Microsoft Bing Search API, JavaScript, Python, Flask*