Ujjwal Pasupulety

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EDUCATION

NITK SURATHKAL

B.Tech in Information Technology
Expected May 2019 | Mangalore, India
CGPA: 9.24(as of Dec 2017)

DELHI PUBLIC SCHOOL SOUTH

Grad. May 2015 | Bangalore, Karnataka, India
XII grade: 96.8%(School Topper, 2015)
X grade: 10.00 CGPA(2013)

LINKS

Github: ujdcodr
LinkedIn: ujjwalpasupulety
Computer Music: ujjwal-pasupulety
Blog: TechnGizmos

COURSEWORK

UNDERGRADUATE

Computer Architecture
Computer Networks
Operating Systems
Unix Programming
Paradigms of Programming Languages
Computer Graphics
Object Oriented Analysis and Design
Parallel Computing
Database Systems
Soft Computing
Distributed Computing Systems

SKILLS

PROGRAMMING

Fluent:
C • C++ • Python • LaTeX• HTML • CSS • Java • Git
Familiar:
Javascript • PHP • MySQL • Rust • Shell script • ChucK

SOCIETIES

Web Enthusiast's Club NITK
Campus Ambassador, Bosch RBEI
Tronix Committee
Indian Society for Technical Education

ACHIEVEMENTS

1st place, BOSCH Campus Ambassador meet
Finalist, HP Codewars Bangalore
Finalist, Samsung Make-a-Thon at NIT Trichy
4th Place, ML Hackathon by Intuit at NITK

EXPERIENCE

PES UNIVERSITY | BANGALORE, KARNATAKA

Winter Intern | The Crucible Of Research and Innovation
Dec 2017 – Jan 2018

- Working on system diagnostics of PISAT - A student satellite
- Wrote Python scripts to simulate the telemetry of various health parameters and plotted them

Summer Intern | Centre for Pattern Recognition and Machine Intelligence
May 2017 – Jul 2017

- Worked in the Precision Agriculture domain in collaboration with Cultyvate, a startup aimed at providing better crop yields using data analytics
- Developed linear and logistic regression models for gauging the amount of water required for sugarcane cultivation

Summer Intern | Centre for Knowledge Analytics and Ontological Engineering
May 2016 – Jul 2016

- The focus was to make ontologies more interpretable by laymen that possess limited domain knowledge of the application domains
- Prototyped a GUI-based SPARQL querying software using Project Pencil
- Created Computer Generated music using the ChucK programming language and co-mentored a workshop on the same

RESEARCH

SYSTEMS, PARALLELIZATION AND ARCHITECTURE RESEARCH LAB |

Undergraduate Researcher
Sep 2017 – Present | Mangalore, Karnataka
Working with Bheemappa Halavar and Prof. Basavaraj Talawar to create a tool to accurately estimate the delay, power and area of different types TSVs(Through Silicon Via) for three-dimensional Network on Chip architectures

RELEVANT PROJECTS

VAFLE - A PARALLELIZED DATA ENCODING ALGORITHM (Link)

- Significant improvement over the basic Run Length Encoding scheme
- Written using the OpenMP API for C++ exploiting data parallelism

MOVIE GENRE CLASSIFICATION USING LOW-LEVEL FEATURES

- Used Python OpenCV to generate Hue-Saturation histograms for over 4000 images
- Applied various distance ranking techniques to classify images into 6 genres

IMPROVED PATTERN-BASED SECURITY SYSTEM FOR ATMS (Link)

- Implemented in Java using Swing for the UI
- Increases ATM security by a factor of 40 with an Android-like lock screen pattern

OPEN SOURCE CONTRIBUTION FOR NETWORK SIMULATOR 3 (Link)

- Ported a Perl script that converted a file written in the Felix Connection Vector format into a format more suitable for reading by tmix-ns using C++

BLACKJACK COMPUTER GAME (Link)

- Human vs Computer casino game programmed using the OpenGL API
- Simple OpenGL Image Library to map card images as textures on 2D surfaces

UNIX UTILITY SUITE (Link)

- Alarm clock, News Reader, Weather forecast using Zenity
- Wrote Shell Scripts and a Python backend for web scraping

FUZZY-C MEAN CLUSTERING USING MAPREDUCE

- Implemented in Python using the Cloudera Quickstart Virtual Machine

CYCLIC REDUNDANCY CHECK USING RAW SOCKETS (Link)

- Implemented a client-server app running on a single system exchanged real-time data
- Errors introduced manually from the client side were detected at the server end

ONLINE PRICE AGGREGATOR ANDROID APP (Link)

- Finds the lowest price of a commodity entered by a user and links to the item's page
- Integrated with jSoup scraping data from websites like Amazon and Snapdeal