RAJAGOPALAN GANGADHARAN
17BCE1202
Computer Science and Engineering
Vellore Institute of Technology, Chennai

Email: g.raju2000@gmail.com
LinkedIn: Rajagopalan
Contact: +91 9941154469
Mylapore, Chennai – 4

Objective: I am an Aspiring Software Developer Looking forward to an opportunity for working in a dynamic, challenging environment, where I can utilize my skills for developing my career and for the growth of the organization.

ACADEMIC QUALIFICATIONS

Year	Degree	Institute	CGPA / %
2017 - Present	3rd Year BTech CSE	Vellore Institute of Technology, Chennai	9.45
2017	Class XII (CBSE)	P.S. Senior Secondary, Chennai	94.4
2015	Class X (CBSE)	St.John's Senior Secondary, Chennai	9.6

SCHOLASTIC ACHIEVEMENTS

- Successfully completed **Google Summer of Code 2019** with Haiku, Inc. (2019)
- Successfully completed **HactoberFest 2019** . (2019)
- Paper Presentation on Suffix Trie in an **International Conference** held in VIT. (2019)
- Runner up in **2x10 Code Relay.** (2018)
- First Place for making a game in International Language Day Contest held in VIT. (2017)
- Ranked among top 5% in **TopCoder Open 17**. (2017)
- Secured a rank in top 2% of all students in VIT, in 1st year. (2017)
- Cleared **Zonal Computing Olympiad**. (2015)

TECHNICAL SKILLS

- Programming Languages: C,C++,Python,JavaScript,C#,Java,Bash,PHP,HTML,CSS,Ajax
- Frameworks: MERN Stack(MongoDB,Express.js,React.js,Node), Meteor.js, Bootstrap,Less, FactoryBoy, ReactNative, Selenium,Qt5
- DevOps: Git,Kibana,Elastic Search
- Advanced Programming: C++/C# CLI, CUDA, Cmake,ASM
- Libraries: Tensorflow, Keras, Boost, OpenCV, NLTK, OpenMP, MPI, Hadoop, MapReduce
- Technologies/Softwares: Adobe XD, Adobe Photoshop, Adobe Premiere Pro, Adobe After Effects, Unreal Engine 4, Unity, Blender, Google Web Designer, MATLAB
- Documentation: Word, Markdown, Latex
- Platform: Qt,Qt5,GTK,Windows,Unix,Linux,Android

GITHUB PROFILE

https://github.com/RAJAGOPALAN-GANGADHARAN

RELEVANT COURSES TAKEN

- DATA STRUCTURES AND ALGORITHMS
- OPERATING SYSTEMS
- IMAGE PROCESSING
- THEORY OF COMPUTATION AND COMPILER
- OBJECT ORIENTED PROGRAMMING
- MACHINE LEARNING
- SOFTWARE ENGINEERING
- MICROPROCESSORS
- GRAPH THEORY
- DATABSE MANAGEMENT

WORK EXPERIENCES / INTERNSHIPS

CONTRACT JOB WITH QT. (September,2019 – Present)

- Worked on porting Webkit using Cross platform UI framework Qt5.
- Various Networking Protocols implemented with native Qt network API's .
- Cross platform Browser Engine over Mac, Windows, Linux, Android using Qt5.
- Used various rendering API's of Qt5.
- Skills: Qt5, C++, cmake, Unix, Linux, Mac, Windows, Android, Object Oriented Programming, Windows API, Web.

2019 GOOGLE SUMMER OF CODE STUDENT WITH HAIKU, INC. (May,2019 – September,2019)

- Student Developer in Google Summer of Code.
- Porting WebKit to Haiku.Learnt the art of Structured Development.
- A chance to connect and learn from experienced developers.
- Worked on porting WebKit to Haiku. Designed and Implemented various Operating System Concepts, OpenGL and rendering. Advanced Git skills. Documentation and Blogging also done.
- Various Networking Protocols with native Haiku network API's.
- Sharp uptick in softskills like Software development, design, Product design, communication, report and documentation, modular development.
- Skills: Webkit, Browser, C, C++, OS,Scheduler, cmake, HTTP, HTTPS, HTTP2, jam(build system), Object Oriented Programming, Git, Markdown, Blog, Docker,Virtual Machines, KVM,Kernel,Bash Scripting.

RESEARCH INTERN AT IIITDM, CHENNAI. (May,2018 – July,2018)

- Detection of fabric flaw using Machine Learning.
- Miniature model mimicking conveyer belt in which cloth was passed created using Arduino.
- Implemented using COCOA model (Transfer Learning with Tensorflow).
- Various types of defects like loops, stain detected using edge detection in OpenCV.
- Skills: Machine Learning, Tensorflow, python, Arduino, OpenCV, Transfer Learning

TESTING ENGINEER AND ANALYST – VPROPEL, VIT CHENNAI. (May,2017 – May,2018)

- VPROPEL – Online programming platform for VIT Students by SCSE, VIT CHENNAI
- Performed rigorous Functional Testing using Selenium.
- Database populated for test purposes using Factory Boy.
- Created a Specific browser using CEF(Chromium Embedded Framework) to prevent plagiarism.
- Analysed the Usage pattern using Kibana and Elastic Search.
- Travis Continuous Integration for the tests done.
- Skills: Django, python, Selenium, Factory Boy, SQL, CEF(C++) ,Kibana, Elastic Search, Javscript, HTML, CSS, Web Programming.

STRENGTHS

TEAM PLAYER LOYAL ACCURATE

SOFTWARE ENGINEERING SKILLS	EFFICIENT	COMMUNICATION
PROBLEM SOLVING	QUICK GRASPING	MULTI TASKER

PROJECTS

PREDICTIVE KEYBOARD

- An Adaptive On Screen Keyboard that autocompletes and predicts words based on users usage.
- Created a DLL and exposed objects to be called from C# forms. C++ is used for faster computation and prediction with C# for easier UI design.
- Suffix Tree written from scratch without use of any external machine learning libraries. Also uses Bayesian network for probabilistic prediction.
- Multi threaded architecture created using OpenMP library.
- Link: https://github.com/RAJAGOPALAN-GANGADHARAN/Predictive-Keyboard
- Skills: C++, C#, C++/C# CLI(Marhsalling), OpenMP, Multithreading, WinForms, Xaml.

JS-OS

- Operating System on the web.
- Created a portable operating system on the web using MERN stack(MongoDB, Express.js, React.js,Node).
- Uniform UI and state preservation across all platforms.
- Link: https://github.com/RAJAGOPALAN-GANGADHARAN/JS-OS
- Skills: JavaScript, MongoDb, Express.js, Node.js, npm, React.js, HTML, CSS, DBMS

PERSONAL ASSISTANT

- Created personal virtual assistant called Friday.
- An AI powered voice assistant similar to Jarvis.Voice to speech using Google speech to text Engine.
- Ability to detect emotions, object through integrated WebCam. Created a Convolutional Neural Network to identify residents. Uses Natural Language Processing to understand user's queries.
- Implemented over Raspberry Pi3 to extend its capability through IOT.
- Network Streaming and Cluster for processing data from RPI3.
- Link: https://github.com/RAJAGOPALAN-GANGADHARAN/FRIDAY
- Skills: Python, Natural Language Processing, Tensorflow, NLTK, OpenCV, MPI, Raspberry Pi, Raspbian

PARALLELIZING DIJIKSTRA'S ALGORITHM WITH LAZY UPDATE USING CUDA

- Using Cuda to parallelize the Lazy update version of Dijkstra.
- Implemented parallel algorithm using CUDA. Created an interactive GUI with OpenGL.
- Skills: Data Structures and Algorithms, CUDA, C++, OpenGL, High Performance Computing, Graphs.

SIMPLE PHYSICS ENGINE

- Simple physics Collision and Render Engine using CUDA C++ and OpenGL.
- Gathered data for different kinds of materials to simulate different materials.
- Skills: CUDA C++, Parallel and distributed Computing, GPU, OpenGL

OPEN SOURCE CONTRIBUTIONS

QTWEBKIT

- Getting Webkit to compile on Qt platform - https://github.com/qtwebkit/qtwebkit/pull/917

HAIKU

- Porting webkit to haiku - https://github.com/haiku/webkit/pulls?q=is%3Apr+is%3Aclosed+author%3ARAJAGOPALAN-GANGADHARAN
- Blog reports - https://www.haiku-os.org/blog/rajagopalan/

LIBRE HEALTH HER

- Code Refactor - https://github.com/LibreHealthIO/lh-ehr/pulls?q=is%3Apr+is%3Aclosed+author%3ARAJAGOPALAN-GANGADHARAN

GEOPUZZLE

- Fixed Typo and Translation and Build issues - https://github.com/TyVik/geopuzzle/pulls?q=is%3Apr+is%3Aclosed+author%3ARAJAGOPALAN-GANGADHARAN

POSITIONS OF RESPONSIBILITIES

PROGRAM REPRESENTATIVE FALL YEAR 2017 (2017 – 2018)

- Chosen as Program representative among 1st year students of Computer Science.

DEVELOPER AT QT (2019 – Present)

- Qt open source organization member – regular contributor.

DEVELOPER AT HAIKU (2018 – Present)

- Haiku open source organization member – regular contributor.

DEVELOPER AT LIBRE HEALTH HER (2018 – Present)

- Libre health her open source organization member – regular contributor.

MEMBER OF FINE ARTS (2018 – 2019)

- Worked more than 75 hours part of organizing and designing events for VIT Chennai.