

CAREER OBJECTIVE

C/C++ software developer with expertise in planning and assessment, requirements definition, feature and functionality design and development, coding, testing, QA, implementation, product and infrastructure updates, and maintenance. A specialist in object-oriented design and analysis with a history of building unique and original products and solutions using intuitive problem-solving and creativity.

EDUCATION

- **Master's Degree in Computer Science - University of Texas, Arlington [Fall 2021 - present]**
[Key Courses: Data Analysis and Modelling techniques, Database Systems, Machine learning, Data Mining, Theory of Computation, Operating Systems, Design and Analysis of Algorithm, Software Engineering, Artificial Intelligence, Web Data Management, Cloud Computing]
- **Bachelor's Degree in Electronics and Communication Engineering – Banasthali Vidyapith, Rajasthan, India [July 2014 - May 2018]**
[Key Courses: Computer Architecture, Digital Communication, Object oriented Programming, Satellite Communication, Digital Electronics, Cpp Programming]

SKILLS

Programming Languages	: C, C++, Python (TensorFlow, Open-AI, Open-CV, Scikit-learn), Golang, Core Java, ASP.NET
Web technologies	: HTML5, CSS, Angular4
Database Technologies	: SQL, MySQL, MS Access
Software	: Eclipse, PyCharm, Jupyter-Notebook, Visual studio
Version controllers	: GIT, Kaggle
Operating Systems	: Windows, Linux

WORK EXPERIENCE

Systems Engineer, Infosys Pvt. Ltd., India [Oct 2018 - Feb 2020]

- Project: Development and Enhancement of Media Gateway Control Function Product-GSX (Gateway Signaling Exchange). Client: Ribbon Communications, USA.
- Exposed to data structures, pointers along with memory management in C++ and worked on SIP (Session Initiation Protocol) stack and sip-parser files to parse new headers and fields in SIP messages as well as in SDP (Session Description Protocol).
- Worked on call flows of SIP calls as well as ISDN/ISUP calls and protocols like TCP/UDP, OSI layers, RTP, SMTP, DNS, etc.
- Performed scripting for various audits and for smooth work structure in Python.
- Awards: Awarded 'Winner of Hackathon' during the first year of tenure in the project for developing an audit tool to stop Memory Leakage and improving the efficiency of the product (Reduced manual work from days to minutes)
- Experience in LINUX IDE for C/C++ UNIX Shell Scripting and knowledge in python scripting.

Research Intern, Defense Research and Development Organization, Delhi, India [Jul 2017 - Dec 2017]

- Studied Microstrip and Patch Antenna which works in Bluetooth frequency range i.e., 2.45GHz as well as Wi-Fi range i.e., 5GHz. Developed a simulation using Application CST Microwave Studio and Proteus ISIS. Explored how these antennas function in Mobile Communications.

Intern Embedded Engineer, HCL Pvt. Ltd., Delhi, India [May 2016 - Jun 2016]

- Researched about Embedded Systems and the way it works on hexadecimal codes in Embedded C language. Learned about Atmel Studio and ISIS Proteus Software for building a home automation system, first designed and applied simulation later did hardware part using program circuit board and integrated circuit ATMEGA 8.

TECHNICAL PROJECTS

Auto-Insurance Customer Analysis & Prediction using K-means Clustering, University of Texas at Arlington

- Designed an ML model that predicts changing Auto insurance based on its historical prices over a period of five years, given the respective news articles post-closing time of the previous day and other globalization factors. Employed Machine learning and Deep learning algorithms such as K-means Clustering and Hierarchical clustering to understand and predict the vehicle insurance. Achieved ~ 83% accuracy.

Analysis of Supervised Learning Models to predict Diabetes severity, University of Texas at Arlington

- Designed ML models such as Logistic Regression, K-Nearest Neighbours, Random Forest, Support Vector Machine to understand and predict the extremity of diabetes of patients to reduce risk and made a webpage for user to input related field values and check the severity of diabetes. Accuracy ~ 84% ([Click here to view blog](#))

CIFAR-10 image classifier using Convolutional Neural networks, University of Texas at Arlington

- Built a Neural network model with multiple convolutional layers (CNN), cross-entropy function and SGC optimizer. Improved the performance by increasing number of layers and epochs. Accuracy ~ 65% ([Click here to view blog](#))

Naïve Bayesian Classifier used for sentiment analysis of Imdb reviews, University of Texas at Arlington

- Built a Naive Bayesian model that processes large amounts of Imdb reviews data and classifies them into positive and negative reviews based on the words used and their prior/posterior probabilities. Applied Laplace smoothing and studied the efficiency variations. ([Click here to view blog](#))

Web Application on Attendance Tracking System, Banasthali Vidyapith, Rajasthan, India

- Designed and developed website for attendance tracking with features including Attendance management as well as viewing whole day schedule for faculty as well as students, reducing the paperwork and making it time efficient.

Simulation of Microstrip Patch Antenna for Mobile Communication, DRDO, Delhi, India

- Employed CST Microwave Studio (EM Analysis) application along with real-time designing and optimizing techniques - Firebase to pick up electromagnetic field values from the simulation and designing in the way so that antenna is giving maximum coverage with high speed. Achieved ~ 98% accuracy.

Radio Frequency Identification Card Reader, Banasthali Vidyapith, Rajasthan, India

- Learned about Atmel Studio and ISIS Proteus Software for building a RFID card reader, first designed and applied simulation later did hardware part using program circuit board and integrated circuit ATMEGA 8.

CLUBS AND ORGANISATIONS

- **Outreach Lead – Innovacation Club** Core Team at Banasthali Vidyapith.
- **Volunteer – National Service Scheme** active member worked to ensure that everyone who is needy gets help to enhance their standard of living and how to lead a good life despite a scarcity of resources.

ACHIEVEMENTS

- Winner of Hackathon at Infosys for adding an innovative feature to existing Media Gateway
- First position in 'Robot Race' a technical event held by innovacation club at Banasthali Vidyapith
- First position in the event 'Phyction' in the National Technical Fest 'Mayukh 2k16' held at Banasthali Vidyapith
- First position in the event 'Divertido-Twiddle' an interview event conducted by ICE Club held at Banasthali Vidyapith
- Second Position in Model Making Competition (Working Van-De-Graff Generator) held at School
- Member of Student council as House Leader at School.
- Winning position at District Level Race competitions