

EDUCATION

- M.S. in Computer Science, University of Florida, GPA 3.62. **Jan 2017 – Dec 2018**
- B.E. in Electronics and Communication Engineering, Thapar University, Patiala, India, CGPA 7.12/10. **Aug 2013 - July 2017**

LANGUAGES AND TECHNOLOGIES

- **Skills:** Java, C, C++, C#, .NET, Verilog, Python, VHDL, SQL, Git, JavaScript, HTML5, CSS, PHP, Spring MVC, Unity 3D, Android
- **Platforms:** Linux, Windows; **Good in Algorithms and Data Structures.**

EXPERIENCE

- **Research Intern, DKOP Labs Pvt. Ltd., India:**
 - Worked on VLSI and IC fabrication using digital circuits and logic gates along with verification and simulation of digital circuits using Verilog. **2015**
 - Designed and implemented the I2C communication protocol for a master device. Testing was done on an FPGA kit.
- **President, AIESEC:**
 - Mentored students for improving skills for better recruitments through various workshops and orientations. **2014**
 - Received award for best Organizing Committee President
- **Summer Intern, UvSofts Tech. Pvt. Ltd., India:**
 - Developed a DTMF controlled security system using an AVR microcontroller. **2014**
 - Programming for the embedded circuit was done in C language.

PROJECTS

- **Used Car sales: SQL, Java, Spring MVC framework**
A web application to buy and sell used cars. A large database for the used cars was obtained from eBay. A buyer could browse through the advertisements posted by other sellers and obtain the results conforming to his/her requirements by applying various available filters which would use complex SQL queries to extract the desired tuples from the database. A platform for efficient communication between a buyer and seller was developed. **2018**
- **Care for her: Unity 3D, C#, Virtual Reality**
An application to spread awareness of maternity care and issues during puberty. Users could be educated of the causes, treatment and symptoms of common maternity problems and problems faced at the time of attaining puberty using the application in an interactive way with the help of Virtual Reality. Development was done in Unity 3D. Actions and interactive behaviors to application elements were scripted in MonoDevelop using C#. 3D models were extracted from Turbosquid and Autodesk. **2018**
- **Furniture AR: Android Application, Augmented Reality, Unity 3D, C#**
An application to display three-dimensional visualizations of home furnishing products which augments them in the real environment using marker-based augmented reality. Application was developed using Unity 3D and scripting was done using C#. **2017**
- **Dynamic de Bruijn graphs for genome assembly: C++**
Implemented de Bruijn graphs for Genome Assembly of DNA Sequences, developing a directed graph between overlapping nucleotides in the DNA sequence using minimal perfect hash maps. Also, made a static de Bruijn graph dynamic i.e. incorporated dynamic addition and deletion of nodes and edges to and from the graph respectively. **2017**
- **Gator Seasons, a weather channel: Java, Spring MVC framework, SQL**
A platform for predicting events like floods, storms, tornadoes, as well as weather, precipitation and humidity in an area in the United States using previous year weather data of the U.S. from 'NOAA'. **2017**
- **Huffman Encoder-Decoder: Java8**
Using Huffman Coding and implementing 4-way cache optimized heap to encode and decode large data. **2017**
- **Compact High-Power Pulse Generator: Research project in Power Electronics**
Designed a high-power nanosecond pulse generator for commercial and industrial environment by concentrating energy, both in time and space, to pulses of high intensity which further have applications in various military, medical and civil fields. Designed a circuit using a DC-DC converter as voltage-converter, a high voltage MOSFET as a switch and a CMOS Digital IC as a pulse generator. **2016**
- **District Collector System: Java**
An implementation of various schemes in the field of health, sanitation, bank etc. for different districts in India. **2015**