

EMPLOYMENT

Front-end Developer	Easy Insurance, Pakistan	Dec 2018 - Feb 2019
<ul style="list-style-type: none">Added features to the comparison tool of the website. Sorting insurance company plans according to the user's preference and other filters. Added calculation and displaying of depreciation rate according to a user's data for car insurance.		
Student Developer	Processing Foundation, Google Summer of Code - 2018	Apr 2018 - Aug 2018
<ul style="list-style-type: none">Improved p5.js WebGL mode by implementing arc, point, bezierVertex, curveVertex and quadraticVertex. Worked on issues related to these primitives. Ported Input examples from Processing API to p5.js. Added documentation and test examples.		

EDUCATION

Islamabad, Pakistan	National University of Sciences and Technology, SEecs	Aug 2014 - June 2018
<ul style="list-style-type: none">Bachelor of Science in Computer Science with a CGPA of 3.16/4.0.Projects for Data Structures, Computer Graphics, Web Engineering, Digital Image Processing, Advanced Programming were chosen among the top projects in class.Core Courses : Object Oriented Programming, Data Structures and Algorithms, Computer Graphics, Linear Algebra, Digital Image Processing, Numerical Analysis, Artificial Intelligence, Operating Systems, Database Systems.		

TECHNICAL EXPERIENCE

- A.R Based Interior Design** (2018). Android application that allows users to visualize 3D furniture in their room using augmented reality. Worked on the backend code for the application which involved selecting a 3D furniture, moving it around the room and removing it using ARCore. **Unity, ARCore, C#**
- Marbles** (2018). Web based Multiplayer racing game that enables users to compete with each other in real-time. Worked on collision detection, designing game level and calculating a player's position with respect to the other player. **Three.js, Socket.io, Javascript**
- Pedestrian Detection** (2017). Pedestrian Detection in images using Histogram of Oriented Gradients as the descriptor and Support Vector Machine as the classifier. Wrote descriptor from scratch to understand the underlying concepts. Used scikit-learn to integrate SVM. **PIL, Numpy, Scikit-learn, Python**
- Link State Routing Protocol** (2017). Implemented a simulation of Link State Routing Protocol on Python. This involved working with threads for sending and receiving packets on virtual routers. Also worked out the algorithm to detect dead routers in the network. **Sockets, Threads, Python**
- Mathemagician** (2016). Android app for young children to help them learn and improve elementary mathematical concepts. The app consisted of 6 games for Counting, Addition and Subtraction. Worked on animation, writing logic for all games and designing the application. **Corona SDK, Lua**
- IdeaForest** (2016). A social networking site to unite entrepreneurs and developers on a single platform. Individuals with the right ideas can collaborate with individuals with the right skills. Implemented a real-time notifications system and a chat client using Ajax. Users can post an idea or work together on a project posted by others. **Bootstrap, Ajax, Javascript**
- Checkers** (2015). Checkers game against A.I using Minimax Algorithm. Wrote A.I code, game rules and implemented graphics. **SFML, C++**
- Encryption Algorithms, PPM Image Editor** (2014). Worked on different encryption algorithms including Caesar Cipher, Solitaire Encryption and RSA Encryption. Implemented an image editor for PPM image format. **C++**

EXTRACURRICULAR

- Personal projects:** Coding experiments related to computer graphics.
- Playing games:** Currently playing Resident Evil 2 (Remake), Splatoon 2, Moonlighter, Super Smash Bros Ultimate.
- Open source:** Member of the Processing Foundation organization at Github.
- Outdoor activities:** Traveling, Photography, Running.

LANGUAGES AND TECHNOLOGIES

- C, C++, C#, Python, Lua, Javascript.
- Jquery, Php, MySql, Bootstrap.
- Git, Unity, Matlab, Visual Studio.
- OpenGL, WebGL, p5.js, Three.js, ARCore, SFML, PIL, Numpy.