Aryan Khera

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Education

B.E. Mechanical Engineering

Thapar Institute of Engineering and Technology, Patiala, Punjab

2016 – present

GPA – 8.67/10 (till 6th Semester)

Class XII C.B.S.E

Shivalik Model Sr. Sec. School, Nangal, Punjab

2015 - 2016

Marks – 86.2%

Class X I.C.S.E

Mount Carmel Sr. Sec. School, Una, Himachal Pradesh

2013 - 2014

Marks – 88.4%

Skills

Programming Languages- Java, Dart, C++, Solidity, VBA, Python

Markup Language- HTML

Frameworks & Toolkits- Flutter, Flask

Version Control- Git

UI/UX Tools- Adobe XD, Invision Studio, Zeplin

CAD Tools- PTC Creo, NX/Unigraphics, Solidworks

CAE Tools- Breault APEX

Experience

R&D Trainee

L.G. Electronics India Ltd., Greater Noida, U.P.

January 2019 – June 2019

I was responsible for production support and new C1 grade (major structural change) microwave oven development. My major task was to replace the incandescent lamp used in the oven with a LED.

- Find the optimum location, material and structure for LED holder.
- Prepare design guidelines based on testing and analysis.
- Design a LED holder and perform photometric analysis on it.

- Remove any 3F (Feel, Fit and Finish) issues.

Project Trainee

Honda Cars India Ltd., Greater Noida, U.P.

June 2018 – July 2018

My project was to study process and defects taking place inside Automotive Paint Shop.

Projects

Room Swap android application

Designed and developed an android application for students who were randomly allotted rooms against their preference during the Hostel allotment process. It helped the students to find a match with whom they could swap their rooms. The userbase reached 55 students within the first hour of its launch. Total userbase 89 out of 140 affected students.

- Designed an algorithm for direct and multiple swapping of rooms.
- Developed the UI and backend of the application for direct swapping.

Tools Used- Dart, Flutter, Firebase Cloud firestore

Stock Portfolio Web Application

A web app via which you can manage portfolios of stocks. Not only will this tool allow you to check real stocks' actual prices and portfolios' values, it will also let you "buy" and "sell" virtual stocks by querying IEX for stocks' prices.

- Developed the backend of the webapp in Flask framework.
- Implemented a SQLite database to store user credentials and portfolio information
- Webpages:
  1) "Quote" webpage to check and compare stock prices using IEX API
  2) Login and Register webpage
  3) Portfolio dashboard to check the current holdings and their current value (Profit/Loss)
  4) History webpage to check all the transactions

Tools Used- Python, Flask, Jinja2, HTML, CSS, Bootstrap, JavaScript, AJAX, SQLite

UX Case Study of mobile payments in India

A user experience case study of current mobile payment solutions in India and how could they be improved.

- Created User Personas and conducted interviews.

- Created User Journey and mood map.
- Analyzed the pain points and designed a user flow for a better mobile payment solution.
- Created wireframes and designed prototype for a mobile app for the proposed solution.

Tools Used- Adobe XD, Invision Studio

Design and Financial analysis of Piezoelectric tiles

Designed and checked the financial feasibility of electricity generation using piezoelectric tiles.

Line Follower Robot

Developed a Line following and obstacle sensing robocar using Arduino Uno microcontroller and Xbee radio module.

Redesign Mangonel

Design, construction and analysis of a "Mangonel".

- Performed structural analysis of certain key components of the Mangonel for static and dynamic stresses.
- redesigned the throwing arm of the Mangonel to optimize for distance without compromising its structural integrity.

Tools Used- Arduino Uno, MS Excel

Awards & Certifications

Won 1st prize in Junkyard in Elementos 3.0

- Designed and implemented a monthly bus pass system using RFID and Arduino UNO microcontroller.

aryankhera.studio.design