Shivam Kathuria
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ACADEMIC DETAILS

Qualification	Institute	CGPA/%	Year
Bachelors in Technology	Punjab Engineering College, Chandigarh		
Electrical Engineering (Major)		8.47	2020
Computer Science (Minor)		9.5	2020
Senior Secondary CBSE	SGGS Collegiate Public School, Chandigarh	91%	2016
Secondary CBSE	Bhavan Vidyalaya, Panchkula	10	2014

INTERNSHIP EXPERIENCE

- **J.P. Morgan Chase & Co., Mumbai, India**   Jan'19 - June'19
  - **Objective**: Develop FinTech tools for Research.
  - Full stack web development of a **Django** app which uses **Machine Learning** and **Natural Language Processing** to get insights on the topics under study. **Released firm-wide**.
  - Developed a standardized **VBA** tool to automatically update charts. **Released firm-wide**.
  - Automation of periodicals which involved optical character recognition, **Auto-Hot-Keys**, rule based **Natural Language Generation** and **Web-Scraping**.
  - Data Visualization and Analysis using **Tableau** and created a dashboard to analyze competitiveness based on geographical density and created a region-wise filter search.

- **Indian Institute of Science, Bengaluru, India**   May'18 - July'18
  Department: Robert Bosch Centre for Cyber Physical Systems
  (Mentors: Prof. Bhardwaj Amrutur, Dr. Josephine Selvarani Ruth D.)
  - **Objective**: Develop a humanoid arm to implement self-learning techniques and study its actuation using shape memory alloy.
  - Worked on the object detection algorithm for hand gesture recognition using **Computer Vision** and Deep Learning along with communication between Arduino and webcam using Python.
  - Presented the project at CyPhySS 2018 organized by **Robert Bosch Centre for Cyber Physical Systems**.

TECHNICAL SKILLS & TOOLS

- **Proficient**: C/C++ , Python, VBA, Django

- **Familiar**: HTML, CSS, JavaScript, SQL, Tableau, R, MATLAB, AHK, Arduino, Photoshop, LaTeX

PROJECTS

- **Autonomous Drone**: Mentor - *Prof. Raminder Kaur*
  Final year thesis project - involves developing an autonomous drone with object detection and obstacle avoidance capabilities to go from one point to another.

- **Multilingual Web Crawler**: *Mentor - Prof. Rajesh Bhatia, Prof. Manish Kamboj*
  Working an a project by the **Department of Science and Technology, Govt. of India**, to get the data of all the Indian origin academicians in the world which involves developing a web crawler for multilingual websites.

- **Stock Price Prediction**: *Mentor - Prof. Shruti Jain*
  Neural Networks Course Project - Used LSTM to predict the adjusted closing price for MSFT stock based on opening price, high, low and volume with 88.46% accuracy.

- **Driver Drowsiness Detection**: *Mentor - Prof. Jaimala Gambhir*
  Working on a car safety technology that detects if the driver is getting drowsy as a part of my course project. It involves Facial Landmark Detection and Eye Aspect Ratio calculation using Computer Vision.

- **Character Classifier**: Implemented Hebb's Net and Perceptron Net to classify the character into upper and lower case for a 10x7 input array. Implemented Hebb's, Perceptron and Adaline Net to study the weight calculations mathematically.

- **Solar UPS**: *Mentor - Prof. Jagdish Kumar*
  Developed a 15 level asymmetrical inverter with THD of 12.3%, RMS output voltage of 10.34V and peak to peak voltage of 27.69V with 6 MOSFETs. This project is an implementation of a publication by our mentor.

- **Gesture Replication Robotic Hand**: Developed a robotic hand that mimics human hand gestures. Successfully replicated precise movement by mapping servos to flex sensors along with error reduction.

ACHIEVEMENTS

- **April 2018**: 3rd prize in Open House 2018, PEC for Human Hand Gesture Replication Project

- **March 2018**: 2nd prize in Bot-Pull, RoboTech 2018 held at PEC

- **Dec. 2017**: Finalist in International Sustainability Challenge, Techfest 2017, IIT Bombay

- **Sept. 2016**: 1st Runner Up in Digital India's Strategy Making Competition at PEC

- **Jan. 2015**: 5th in the **Regional Mathematics Olympiad(RMO-2014)** in North West India

- **Oct. 2013**: Awarded for Being the **Best in Multiple Intelligence**

- **2012-2014**: Awarded prestigious **NTS scholarship** by the State Government of Haryana for excellence in Mathematics and Science

POSITIONS OF RESPONSIBILITY

- **PEC Robotics**
  Web Developer and Executive Body Member   *Aug'19 - Present*
    - Developed website for the society using Django.
    - Conducted workshops and teach students about robotics, python, machine learning etc.

- **Career Development and Guidance Centre (TPO)**
  Class Representative   *Jan.'18 - Present*
    - Being the middleman between recruiters and students.
    - Conduct recruitment process for companies and committee events such as Finishing School and OPEN HOUSE and various company workshops.
    - Studied companies and created database to invite companies and startups for recruitment.
    - **Member of Creative Team**: Designed certificates, posters, standees and ID Cards for various events organized by CDGC.

- **PECFEST 2017**
  Sub-Head   *Aug.'17 - Oct. '17*
    - **Sub-Head Publicity**: Led a team of 20 people to work for online and offline publicity of fest.
    - **Sub-Head Robotics**: Organized technical events under the Robotics Society in the college fest.
    - **Sub-Head Designing**: Designed posters for various events for the college fest.

- **NSS at PEC**
  AABHA   *Aug.'16 - May '17*
    - Taught multiple subjects such as Maths, Physics, English to underprivileged students, telling them understand the importance of education and motivating them to study.
    - **Volunteer** in publicity team for blood donation camp to raise awareness about blood donation and designed posters for the same.