Keshav Arora

Bachelor of Technology
Computer Science and Engineering
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EDUCATION

Degree	Institute	Board / University	Year
B.Tech	Punjab Engineering College, Chandigarh	PEC Chandigarh	2022-2026
Senior Secondary	Shri Ram Ashram Public School	CBSE	2022

EXPERIENCE

- **Supple Tek Industries Pvt Ltd** — *Dec 2023 - January 2024*
  Buisness Analytics Intern — Amritsar
  - Led and spearheaded contributions to a comprehensive business analysis project, utilizing SQL Server and Power BI.
  - Executed data-driven insights by proficiently leveraging SQL Server for efficient data querying and manipulation, ensuring accurate and actionable analysis
  - Demonstrated effective coordination with supervisors and team members, fostering smooth project execution
- **IIT Ropar** — *May 2024 - Ongoing*
  Research Intern — Hybrid
  - Conducting research on reinforcement learning to address the forgetting problem in dynamic environments.
  - Utilizing Shapley values to analyze function approximation errors in training Deep Q-Network (DQN) agents.

PROJECTS

- **A20 Blood Bridge**
  Web Platform to bridge gap between patients and donors — **Github**
  - Led a team of 6 in developing a blood donation platform using HTML, CSS, AJAX, and JavaScript for frontend
  - Utilized Node.js and Angular for backend development, enabling seamless communication between users and blood banks, efficient blood requests, and timely notifications to previous donors
  - Implemented SQL for the database management system, ensuring effective tracking of available blood units in blood banks.
  - Developed a Hematologist AI Chatbot trained on blood pathophysiology literature, surpassing ChatGPT in providing accurate responses to inquiries about blood disorders. Leveraged LLAMA2 within a 16-hour timeframe.
- **Multimodal AI Assistant**
  Multimodal AI Assistant Image processing which uses audio to text — **Github**
  - Developed a user-friendly personal assistant interface with voice commands, image recognition, text-to-speech, and speech-to-text capabilities using Whisper and Gradio
  - Enhanced seamless communication through natural language processing
- **Diabetic Retinopathy Detection**
  Aims to segment blood vessels which can be further used to detect multiple diseases — **Ongoing Research Project**
  - Implemented U-Net with ResNet34 and EfficientNet-B7 encoders, achieving 96% accuracy and 98% specificity
  - Developed a PIX2PIX GAN with UNET and UNET++ generators independently, using the FIVES dataset comprising over 600 images to generate highly accurate masks for fundus images.

TECHNICAL SKILLS

- **Programming Languages**: C++, Python
- **Frameworks**: Numpy, Pandas, Tensorflow, Pytorch, Langchain, HTML, CSS, Javascript
- **Additional Skills**: Bug Bounty, Ethical Hacking & Linux

POSITIONS OF RESPONSIBILITY AND EXTRACURRICULAR

- **Marketing Subhead** — *Aug 2023 - Nov 2023*
  PECFEST 2023
  - Engaged with over 100 MNCs, startups demonstrating unwavering commitment to secure collaborations and managed to convert a sponsership deal
- **Implementation Body Lead** — *Nov 2022 - Ongoing*
  ACM-CSS
  - Conducted Workshops for 100+ students on Intro to Cybersecurity and Linux,Realms of Dark Web and Web Exploitation
  - Organised 5 techincal events in PECFEST 2023 and Orientation 2023
- **Open Source Contributor** — *Jan 2024 - Ongoing*
  JWOC 2024 , GSSOC 2024
  - Worked on 10+ projects in computer vision and natural language processing
  - Ranked among the top 30 contributors in the JWOC open-source community out of 250+ participants

ACHIEVEMENTS

- **PEC-CTF**, Winner of PEC-CTF 2022,conducted across college in the first year itself — *2022*
- **Astronomix Hackathon**,Secured 1st Runner-Up in a hackathon with over 30 teams all over tricity. — *2023*
- **Amritsar District Chess Competition**,Won championship 3 times as captain of the school team out of 50 teams — *2018*
- **Sameen Singh International Chess Tournament**,Won cash prize out of 500+ participants [FIDE Rating 1420] — *2019*