Harishankar Kumar

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EDUCATION

- **Thapar Institute of & Engineering Technology** Patiala, Punjab
  Bachelor of Technology - BTech; 8.6 CGPA *2020 – 2024*

- **Kendriya Vidyalaya No 2** Ferozepur Cantt, Punjab
  XII, PCM; 95% Boards *2007 – 2020*

OPEN SOURCE AND VOLUNTEERING

- **Google Summer of Code** Remote, Remote
  Contributed to ScummVM under GSoC'23 - **Project link** *May 2023 - Sept 2023*
  - **Audio Mixers and Graphics**: Added support for new audio formats and improved frame rendering algorithms including optimizations and pixel-by-pixel drawing.
  - **BuildBot (CI/CD)**: Fixed deployment warnings, memory leaks and added support for screenshot matching between subsequent builds.
  - **Compiler Optimization**: Fixing bugs in compilers and adding edge cases in code, Compiling Lingo to C++ using Yacc Parser.
  - **Debugging**: Using tools like GDB, and ASAN to debug and fix memory leak, segmentation faults and debugging any bugs in code.

EXPERIENCE

- **AI Search** Remote
  Co-Founder - AI Search: Uncovering User Intents, Crafting Human-Centric Search *Oct 2023 - Present*
  - **Fullstack Engineer**: Developed ReactJS frontend with secure REST APIs for business layer logic, enabling seamless one-click deployments and other features using FastAPIs and MongoDB.
  - **RabbitMQ/Microservices**: Implemented an event-driven architecture with decoupled services for search, scraping, background tasks, and more. Included essential features such as logging, monitoring, and scalability.
  - **Web Scraping Service**: Designed a web scraping service using scrapy servers and scrapyd, synchronized with the event-driven architecture. Supports cron jobs and on-demand scraping.
  - **Search Optimization**: Enhanced search capabilities by feeding crawled data into ElasticSearch. Implemented AI techniques like vector searching/embedders and researched NLP methods to optimize search results.
  - **DevOps and Infrastructure**: Dockerized the entire application stack and created scripts for one-click deployments to servers. Maintained agile development environments for efficient development processes.

PROJECTS

- **MeraAadhar**: An application where user can book operators for **doorstep Aadhar updation**. Winner of Smart India Hackathon 2022 (Team SHARK), **awarded 1 lakh rupees**. (Flutter, Docker, Django, FastAPI) **Link (Linkedin Post)**
- **Finfy**: A **financial training application** to help young adults learn about **financial literacy**, It supported stock market simulation, budgeting, and other features. (Django, Django REST, BeautifulSoup)
- **Pustika**: A **book reselling platform** for getting cheap second handed books, included buying and selling and a portal to advertise current stock. (Flask, SQLAlchemy) **Link (GitHub)**

HONORS AND ACHIEVEMENTS

- **HackTU 2023 Winner**: Collaboration of Societies, Awarded 20k rupees for developing Finfy financial training app
- **SIH' 2022 Winner**: Government hosted biggest student hackathon promoting problem-solving through technology
- **Maketahon 3077 (2021) Winner**: Hosted by Microsoft Learn Student Chapter (MLSC) Society
- **Hacklipse 2021 Winner**: Created Pustika, book reselling platform that is my first university hackathon experience

MISCELLANEOUS

- **Content Analysis of Twitter conversations associated with Turkey-Syria Earthquakes**
  Research paper published under ICDAM 2023 Conference, analysing turkey-syria earthquakes by tweets

- **Data Structures and Algorithm**
  Solved more than 400+ questions on various platforms, profiles: leetcode, geeksforgeeks, codingninjas