HARSH KHANPARA

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GITHUB CODEFORCES LINKEDIN HACKERRANK GEEKSFORGEEKS

EDUCATION

- **MIT WORLD PEACE UNIVERSITY | PUNE | BTech CSE-AIDS** Aug `2021 - June `2025 (9.2 CGPA)
- **XII CBSE | Abhinav Education Society** Apr `2020 - Mar `2021 (70%)
- **X CBSE | Bharati Vidyapeeth University** Apr `2018 – Mar `2019 (86%)

EXPERIENCE

- **Deep Learning Internship | INeuron.ai** **Apr `2024 – June `2024**
  - Collaborated with fellow intern to conduct deep learning architectures along with regularization and hyperparameter tuning.
  - Designed and developed deep neural networks and shallow neural networks.
  - Eliminated unnecessary features, condensing dimensionality to reduce processing up to 40% and streamlined 30% more precision.
  - TECH STACK: Neural Networks, PyTorch, TFX Pipeline, MLFlow, Scikit Learn, Pandas, Numpy, Matplotlib, SQL, Flask, Streamlit.
  - Implementation URL: Project Link.
- **Frontend Engineer Intern** **June`2024 – Present**
- **VR and AI enabled Mock Interview Preparation Platform**
  - LLM Powered AI based interview platform.
  - Functionalities to generate questions, provide detailed feedback reports and graphical visualizations.
  - Also provides general feedback at the end of interview.
  - Real time transcriptions and video processing and anti-cheating LLM model.

ACADEMIC PROJECTS

- **Full Stack Web Application Marketplace for Homestays and Experiences** **Jan `2024 – May `2024**
  - Engineered diverse models for product listings, customer reviews, and user interactions.
  - Implemented sophisticated search and filtering functionalities to allow users to easily find homestays and experiences based on location, price range, amenities, and user ratings, enhancing user satisfaction and engagement.
  - Implemented Passport.js for secure authentication and authorization, ensuring user data privacy and maintaining secure access to user accounts and personal information streamlining authentication and authorization complexity by 90%.
  - Designed the architecture with scalability in mind, utilizing cloud-based services and platforms like MongoDB Atlas and Render for deployment, ensuring the platform can handle increased traffic and growth in user base effectively.
  - Lighthouse performance insights of 76%(performance), accessibility of 89%, 89% best practices used, 79% SEO score.
  - TECH STACK: HTML, CSS, JS, EJS, Passport.js, Node.js, Express.js, Joi, Cloudinary, MONGO DB ATLAS, Render.
  - Implementation URL: Project Link.
- **Full Stack Event Booking Platform – Create and List Events** **Sep `2023 – Feb `2024**
  - Orchestrated seamless user experiences through ZOD for registration and login, integrating social logins alongside traditional methods.
  - Enabled hassle-free event browsing for all users, seamlessly transitioning to login prompts upon ticket booking attempts.
  - Implemented stringent security measures, restricting event detail edits to authorized admins or owners, ensuring data integrity.
  - Integrated Stripe for ironclad payment processing, instilling user confidence with robust encryption and industry-standard security.
  - Lighthouse performance insights of 86%(performance), accessibility of 74%, 97% best practices used, 83% SEO score.
  - TECH STACK: HTML, CSS, JavaScript, Node.Js, React.js, Next.js, Stripe, Vercel, SQL, MongoDb.
  - Implementation URL: Project Link.
- **Full Stack Project Showcase Platform for Developers** **Feb `2023 – May `2023**
  - Highly scalable project storage platform where concurrently many developers can showcase their work.
  - Optimized information retrieval using GraphQL database and GraphQL queries.

- Designed an intuitive and interactive user interface (UI) that facilitates easy navigation, project submission, and exploration.
- Incorporated advanced search and filtering functionalities based on project tags, categories, and technologies used, enabling users to find relevant projects quickly and effectively.
- TECH STACK: HTML, CSS, JavaScript, Next.js, GraphQL, Stripe.
- Lighthouse performance insights of 65%(performance), accessibility of 63%, 78% best practices used, 97% SEO score.
- Implementation URL: Project Link.

- **Cricketer Image Synthesis: A GAN APPROACH** **Jan `2024 – May `2024**
  - Crafted a customized generative adversarial network.
  - Centralized and aggregated input features together to highlight important features with resulted in increased feature recognition for low resolution images.
  - Directed a video to show step by step visualization that steps through training of both generator and discriminator for a series of 100 epochs.
  - Plotted an increasing curve of generated images with peaks of over 0.95 and 0.92 in generator and discriminators respectively.
  - TECH STACK: OPEN CV- Python, PyTorch, TensorFlow, TorchVision, Matplotlib, Flask, Generative AI.
  - Implementation URL: Project Link.
- **AI Driven Number Plate Recognition for Legal Compliance** **Nov `2023 – Feb `2024**
  - Leveraged a comprehensive Korean number plate dataset for robust training.
  - Achieved a substantial 200% reduction in validation loss, enhancing model accuracy.
  - Implemented advanced techniques including batch normalization, convolutional neural networks (CNNs), and LSTM networks.
  - Applied early stopping to effectively prevent overfitting and ensure optimal performance.
  - TECH STACK: Computer Vision, PyTorch, TensorFlow, Matplotlib, TorchVision, OPEN CV-Python, Neural Networks.
  - Implementation URL: Project Link.
- **Advanced Question Answering System Utilizing Large Language Models** **Feb `2023 – May `2023**
  - Achieved bidirectional context understanding through advanced comprehension techniques.
  - Optimized information retrieval efficiency in response to user queries.
  - Expanded the QA system's scope by incorporating multi-language domain knowledge.
  - Delivered accurate answers with meticulous recording of inference times, detailed logging, and cosine similarity scores of 95% to enhance model performance during training and testing phases.
  - TECH STACK: GEMINI, OLLAMA, LLAMA-3, LLAMA-2, PyTorch, Transformers.
  - Implementation URL: Project Link.

SKILLS

- PROGRAMMING SKILLS: Python, JavaScript, C/C++, Java, Dart, GO.
- CORE SKILLS: Data Structures, Algorithms, Operating Systems, Database Management Systems, Computer Networks, Big Data Technologies (Apache Spark and Hadoop), SQL, MongoDB, Object Oriented Programming, API Development, GIT & GITHUB.
- Libraries/Frameworks/Technologies: EJS, Handlebars, Pig, Express.js, Node.js, React.js , PyTorch, TensorFlow, Flask, Next.js.
- Tools and Deployment: Visual Studio Code, PyCharm, Intellij Idea, ChatGPT, AI TOOLS, Power BI, Docker, Render, Vercel, AWS EC2, AWS Amplify.
- Domain Knowledge: Natural Language Processing, Computer Vision, Generative AI, Machine Learning, Deep Learning, Artificial Intelligence, Web Development, Database Querying, App Development(Flutter).
- Currently Learning: JAVA Full Stack Development and Reinforcement Learning.

CERTIFICATIONS AND ACHEVEMENTS

- Data Structures and Algorithms – Sandeep Jain – GEEKS FOR GEEKS – 3600 Marks (Problem Solving + Contests)
- Hack4Change Hackathon Finalists -: Co Hosted by Google, LinkedIn, HSBC etc in 2024.
- Was selected for SIH MITWPU Internal Rounds (In top 5) in 2022.
- COMPLETE WEB DEVELOPMENT (MERN STACK + NEXT JS + SQL + MONGODB) – UDEMY - Maximilian Schwarzmuller (300 hrs project building).
- DEEP DIVE IN TENSORFLOW AND PYTORCH – ZEROTOMASTERY.io – Daniel Bourke – (150+ hours of deep learning models)
- A to Z in Machine Learning, Deep Learning and Artificial Intelligence – Krill & Hadelin – Super Data Science Team
- Solved and contributed in 400+ problems of data structures and algorithms across geeksforgeeks, leetcode and codeforces.
- Platinum Batches in Java and C++ programming language along with 1000+ rating in codeforces.

LANGUAGES KNOWN

- ENGLISH – WORKING PRECISION
- HINDI – NATIVE LANGUAGE
- GUJARATI – MOTHER LANGUAGE
- MARATHI – WORKING PRECISION