

Kartik Subbaram

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No. 18 'A', First Cross, R.M.V Extension, Bengaluru - 560080.

EDUCATION

Manipal Institute of Technology <i>Bachelor of Technology in Computer Science Engineering (CGPA : 9.46/10)</i>	Manipal, Karnataka <i>Aug. 2022 – Present</i>
Vyasa International School <i>Central Board of Secondary Education 12th (91%)</i>	Bengaluru, Karnataka <i>Jul. 2020 – Jul. 2022</i>
Vidya Niketan School <i>Indian Certificate of Secondary Education 10th (99%)</i>	Bengaluru, Karnataka <i>Jun. 2010 – Jun. 2020</i>

TECHNICAL SKILLS & INTERESTS

Relevant Coursework: Data Structures, Design and Analysis of Algorithms, Operating Systems, Parallel Computer Architecture and Programming, Compiler Design, Object Oriented Programming, Database Systems, Digital Systems Design, Principles of Cryptography, Computer Networks
Languages: C/C++, Java, Python, SQL, JavaScript, HTML/CSS,
Frameworks: React, Node.js, Express.js, Material-UI, Bootstrap, FastAPI, Electron, TailwindCSS, MPI, CUDA
Developer Tools: Git, GitHub, Visual Studio Code, Cisco Packet Tracer, Scene Builder, ChatGPT, Microsoft Copilot, MongoDB Compass, Robot Operating System

WORK EXPERIENCE

Iween Software Solutions <i>Intern</i>	Bengaluru, Karnataka <i>May 2024 – Jun. 2024</i>
<ul style="list-style-type: none">• Developed a High-Performance Ticketing Application: Built a responsive and intuitive UI using ReactJS, covering all processes from flight selection to booking.• Optimized State Management and API Integration: Designed advanced state handling for real-time seat selection, meal choices, and baggage options while integrating multiple APIs via Axios for dynamic updates.• Agile Development and Cross-Platform Optimization: Collaborated in an agile environment, ensuring seamless performance across devices through continuous integration and code reviews.	

PROJECT WORK

- Cropify** | *Python, Tensorflow, React, MongoDB, Express, Node*
- * Headed the frontend development of a fullstack application for the CodeCraft hackathon conducted by TAPMI Manipal, earning the **runner-up prize** by implementing algorithms to monitor and identify plant diseases, soil types, and forest fires using Image Classification models.
 - * Led front-end development and **UI/UX design**, utilizing tools like ReactJS, TailwindCSS and ShadCN UI to quickly develop highly responsive interfaces.
- SHA-256 Hash Cracker** | *C++, CUDA, WSL, NVIDIA GPUs*
- * Developed a high-performance SHA-256 brute-force password cracker using **CUDA** to leverage parallel processing on **NVIDIA GPUs**, achieving significant speedup over CPU-based approaches.
 - * Implemented **batch processing** to crack multiple password hashes simultaneously, improving real-world applicability.
- Research on Lightweight Image Encryption (Ongoing)** | *Cryptography, IoT Security, Embedded Systems*
- * Analyzing lightweight cryptographic algorithms for secure and efficient image encryption, targeting resource-constrained environments such as **IoT** devices.
 - * Applying and evaluating the **ASCON** cipher for video stream encryption on edge devices.

EXTRA CURRICULARS

- Rotaract Club Manipal**
Treasurer
- * Organized and conducted workshops, seminars, and professional development sessions
 - * Managed administrative functions, club funding and other activities