

# Karthikeyan K

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## EDUCATION

**Kumaraguru College of Technology Affiliated to Anna University Coimbatore, Tamil Nadu, INDIA**

Bachelor of technology, Computer Science and Engineering

**Courses:** Algorithms and Design, Object Oriented Programming, Data Structures, Artificial Intelligence, Database Management Systems

**Oct 2020-May 2024**

GPA-9.23/10.0

**Bharathi Vidya Bhavan Matriculation Higher Secondary School, Thindal, Erode, Tamil Nadu, INDIA**

Class 12

**Jun 2019-Apr 2020**

85.66%

**Chinmaya Vidyalaya Matriculation Higher Secondary School, Vadavalli, Coimbatore, Tamil Nadu, INDIA**

Class 10

**Jun 2017-Apr 2018**

92%

## TECHNICAL SKILLS

- **Interests and Domain:** Full stack development, Mobile Application Development, Data Analysis, Machine Learning
- **Languages and Frameworks:** Python, JavaScript, TypeScript, C++, HTML, SQL, CSS, JSON, Flask, Git, Next JS, Vue JS, Angular JS, Node JS, NgRx, React Native, Golang, Django, Observables.
- **Databases and QL:** MySQL, MongoDB, Neo4j,
- **Cloud Databases:** Firebase, Neon DB
- **Libraries:** React, Redux, Vuex, Plotly, Matplotlib, Dash, Seaborn, Scikit, Spacy, Keras, Pytorch, Xgboost, Tensorflow
- **Tools and Infrastructure:** Jira, GCP, AWS, Postman, Tableau, Agile, Bitbucket, Swagger Docs, TypeDoc, TSDoc, Payload CMS
- **Operating Systems:** Windows, Linux.

## WORK EXPERIENCE

- **Software Development Intern | Clar Technologies PVT. LTD, Coimbatore, Tamil Nadu, India** **Jul 2023-Jul 2024**
  - Designed dynamic and responsive front-end pages using React.js and Observable, contributed to the creation of comprehensive API documentation with Swagger Docs, and authored detailed front-end documentation with TSDoc and TypeDoc, facilitating team collaboration and knowledge sharing.
  - Integrated blockchain wallets (Leap and Meta wallets) into the front-end, enabling seamless interactions with blockchain functionalities, and identified and resolved critical bugs across front-end and back-end during pre-release testing to ensure application stability.
  - Refactored backend API code for improved performance and scalability, optimized Payload CMS collections for efficient data handling, and enhanced front-end rendering in React.js by implementing lazy loaders for deferred content and efficient backend data fetching.
- **Virtual Intern | Samsung PRISM Program, India** **Mar 2023-Sep 2023**
  - **Energy Calculation Tool Development:** Designed and implemented an energy calculation tool using Golang, optimizing energy consumption models for efficiency analysis.
  - **Initiative:** Researched and designed ideas for automation implementation strategies in present systems to achieve best policies and practices.

## ACADEMIC PROJECTS

- **Go Green: AI-Powered Waste Management System | Next.js 14, Drizzle ORM, TailwindCSS, Google Gemini AI**  
An AI-driven platform for incentivizing eco-friendly waste reporting and collection with real-time task management and community engagement.
- **Mediapipe-based Personal Workout Trainer | Mediapipe, OpenCV**  
A web app that tracks and provides real-time feedback on exercises using the Mediapipe Pose Model, including calorie estimation.
- **Coffee Shop Customer Service Chatbot | React Native, NLP, LLMs, RAG**  
An AI-powered chatbot in a coffee shop app that assists with orders, provides personalized recommendations, and answers menu queries.
- **Game Controller with Computer Vision / ML | MediaPipe, OpenCV, Python**  
An interactive game controller that uses body movements mapped to keyboard inputs via pose estimation and customizable key mappings.
- **IoT-Based Smart IV Drip Stand | IoT, Load Cell, Servo Motors, Microprocessor**  
An IoT-enabled prototype that prevents blood backflow during IV therapy by monitoring fluid levels with a load cell and adjusting flow rates using a servo motor mechanism.
- **Uber Clone Application | React Native, Expo, Google Maps, Stripe.**  
A full-stack mobile app replicating Uber with features like ride booking, payment integration, dynamic data handling, and OAuth authentication.

## PROFESSIONAL CERTIFICATIONS

- Samsung PRISM Program Virtual Internship | Worklet, Mar '23 – Sep '23 Project: Created an Energy Calculation Tool for GoLang..
- React - The Complete Guide 2024 (incl. Next.js, Redux) | Udemy, 01/02/2023
- Mahatma Gandhi Merit Scholarship | Awarded for Outstanding Performance (2021, 2022, 2024).
- Vue - The Complete Guide (incl. Router & Composition API) | Udemy, 02/27/2023.
- Gradskey Core Java Fundamentals Workshop | 8-hour hands-on online workshop.
- Angular - The Complete Guide (2024 Edition) | Udemy, 02/08/2023
- NodeJS - The Complete Guide (MVC, REST APIs, GraphQL, Deno) | Udemy, 01/22/2023
- NodeJS - The Complete Guide (MVC, REST APIs, GraphQL, Deno) Completed by Karthikeyan K on 01/22/2023, taught by Academind Maximilian

## ACHIEVEMENTS

- Published a research paper on an IoT-based Smart IV Drip Stand, presented at the 2021 IEEE ICAECA, focusing on preventing blood backflow and automating fluid flow using load cells and servo motors.
- Tamilan Book of Records & India Records Academy – Record for performing the maximum number of yogasanas (145) by a team of 278 participants for 2 hours, Aug 3, 2016.
- India Records Academy – Record for creating the largest plastic ball mosaic (122.21 sq. meters) by a team, Aug 5-6, 2016