Manik

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ABOUT ME

I am a highly skilled and motivated Software Developer with proficiency in building responsive and scalable web applications.

I am a quick learner, always eager to stay updated with the latest technologies and industry trends. My ability to adapt to new technologies and frameworks allows me to tackle new challenges with confidence and efficiency. I value effective communication, cooperation, and teamwork to achieve shared goals.

SKILLS

Frontend Development

- TypeScript
- JavaScript
- React.js
- Redux Toolkit
- HTML
- CSS
- Tailwind CSS

Backend Development

- Node.js
- Express.js
- MongoDB
- SQL
- Python

PORTFOLIO

https://manikdevbhagat.github.io

EDUCATION

Engineering Fellow | Pesto Tech (Sep'22 – Apr'23)
- Developed proficiency in building responsive and scalable web applications using the **MERN stack**, following industry best practices and coding standards.

Bachelor of Technology | IIT-Bombay (Jul'16 – Jul'20)
- Completed B.Tech. in Mechanical Engineering with a CGPA of 7.2
- Awarded **Institute Technical Freshmen of the Year** out of around 900 students.

WORK EXPERIENCE

Risk Analyst |RELSAFE PRA Consulting (Jul'20 – Apr'23)

Internal Fire & Flooding Analysis for Leibstadt Nuclear Power Plant, Switzerland:
- Conducted quantitative screening analysis to identify critical compartments.
- Developed Fire&Flooding PRA Model with necessary adaptations for internal events.
- Created a real-time flood propagation tool using Excel VBA, **significantly reducing flood consequence analysis time by 80%**.
- Led the development of data visualization tools using **React, JS, HTML and CSS.**

Aircraft Crash Analysis for Leibstadt Nuclear Power Plant (KKL), Switzerland:
- Analyzed flight data and estimated aircraft crash frequencies near KKL.
- Estimated probability of non-exceedance for aircraft projectile velocity.
- Quantified failure probabilities of buildings in the event of an aircraft crash.

Research & Development Intern | StrautX Technologies (May'19 – Jul'19)
- Implemented **Model Predictive Control (MPC)** to regulate air output temperature in a distributed solar collector field.
- Utilized Recursive Least Squares Algorithm to estimate plant operation parameters.
- Conducted extensive simulations using OpenModelica System Software.

PROJECTS

Healthi-Verse | Web Development Project, (Oct'23)
- Developed a comprehensive platform that seamlessly connects users with gyms, personal trainers, and dieticians, streamlining the process of booking and hiring.
- Leveraged the power of the **MERN stack** to create a robust and efficient application
- Implemented a secure user authentication system using **JSON Web Tokens (JWT)**.
- Employed **Redux Toolkit** for efficient state management within React.
- Integrated the **socket.io** library to enable real-time chat functionality, allowing users to communicate with personal trainers and dieticians directly through the platform.
- Utilized **Tailwind CSS** to create a visually appealing and consistent design.

Mahindra RISE Driverless Car Challenge, (Jun'18 – Jan'19)
- Part of a 20-member team, creating India's first driverless car with level 5 autonomy.
- One of the **top 11 finalists out of 259 teams**, receiving a Mahindra e2O car.
- Utilized LiDAR and IMU data from the vehicle to create precise environment maps.
- Developed the navigation system, harnessing the power of the **Google Maps API** to successfully obtain GPS waypoints and guide the vehicle to its intended destinations.

ACHIEVEMENTS

Winners – ASME SDC World Finals, USA (Nov'17)
- Achieved **International Rank 1** at ASME-SDC 2017 World Finals, Tampa, USA.
- Collaborated in a 10-member team to construct a versatile bot capable of executing 5 distinct tasks for the competition.
- Led the design and fabrication of the award-winning 'Sprint Mechanism'.
- Implemented **PID Algorithms** on an IMU sensor for precise control.
- Significantly reduced task completion time from **35 seconds to 7 seconds**.

Team Leader – Pick & Place Competition, Asia-Pacific (Jul'19)
- Achieved **1st place** among 22 teams in the competition, winning a $500 prize.
- **Led a 13-member team**, guiding them from the design stage to final prototyping.
- Responsible for planning, organizing meetings & involved in decision making