

Shashank Bhosagi



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EDUCATION

Rajarshi Shahu College of Engineering Bachelor of Engineering, Computer , CGPA – 9.22	Pune 2020 – 2024
Camp Education Society's Abhiman Junior College Higher Secondary Certificate, Percentage – 75.8%	Pune 2018 – 2020

SOFTWARE PROJECTS

Trinity 2024 | (Backend)

- Developed Trinity 2024 backend infrastructure facilitating participant registration, attendance tracking, event management, and data capture functionalities.
- Ensured seamless performance handling up to **100 simultaneous participants** without latency or interruptions.
- Implemented load balancing techniques and auto scaling groups on 4 AWS EC2 instances.
- Ensured smooth connection between the backend and frontend systems.
- Tech-Stack: **Node.js, Express.js, MongoDB, AWS(EC-2, Auto Scaling, Load Balancing), Shell Scripting**

AssembleScript | (Programming Language and Interpreter)

- Successfully designed a **Marvel-themed programming language** dubbed AssembleScript.
- Designed and developed a frontend equipped with a **lexer, parser, and interpreter** components.
- Carefully understandable **error messages** in AssembleScript for enhanced user experience.
- Created comprehensive and detailed documentation for the language on a dedicated website.
- Tech-Stack: **TypeScript, React.js, NodeJS, MongoDB, Bootstrap.**

Self Driving Car | (Game)

- Trained a basic **Convolutional Neural Network (CNN)** to control the car's controllers.
- Integrated **5 virtual** sensors within a JavaScript canvas to detect cars across **three lanes** and lane edges.
- Integrated collision detection through the five virtual sensors to detect any collisions.
- Utilized **proximity** data from 5 sensors to make real-time decisions to dodge obstacles without collisions.
- Employed a **genetic algorithm** for training, iterating over approximately **800 virtual cars** per generation.
- Achieved significant progress in refining the self-driving car's decision-making capabilities through multiple generations of training.
- Tech-Stack: **HTML, CSS, Javascript**

TECHNICAL SKILLS

- **Data Structures and Algorithms, Operating Systems**
- **Languages:** C/C++, SQL, JavaScript, HTML, CSS / SCSS, Shell Scripting
- **Frameworks/Libraries:** React.js, Node.js, Express.js, TailwindCSS, ROS(Robot OS)
- **Tools:** Git-Github, Figma, Blender, VSCode, AWS(EC2, S3, Auto-scaling), Vercel, Cloudflare, Docker
- **Hobbies:** CTFs(Capture the flag), Sketching, Cooking, Learning new Languages.

PUBLICATIONS

Survey Paper: ([Utilizing Satellite Imagery for Flood Monitoring in Urban Regions](#))

- Conference: Fourth International Conference on Image Processing and Capsule Networks, Bangkok.
- In this paper we have surveyed around **50 papers** for methods to extract water from satellite imagery.

ACHIEVEMENTS

- **PCMC Hackathon, District Level:** Secured 3rd prize.
- **UI/UX Design Competition:** Achieved 3rd prize for outstanding UI/UX design skills.
- **DD Robocon 2023:** **AIR 1** in stage 1, **AIR 10** in stage 2 and represented college in stage 3 nationals at **IITDelhi** and came AIR 10.