

Abhishek Ingle

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Education

Master of Science in Computer Science

Courses: Applied Algorithms, Advanced Computer Graphics, Data Mining, Data Science for Physiological Time Series, Software Engineering

Aug 2023 - May 2025(Expected)

Indiana University, Bloomington

Bachelor's in Computer Engineering

Honors: Machine learning and Data science

Courses: Applied Mathematics, Data Structures, Database Management

Aug 2019 - Jun 2023

Pune University, India

Work Experience

React Developer and UI/UX lead

Savitribai Phule Pune University

Nov 2022 - April 2023

Pune, India

- Led the transformation of web application workflows, integrating **React** and **UX design principles** to enhance operational efficiency and SEO score, achieving a remarkable increase from **45 to 80 in just 4 months**.
- Led the development and refinement of an **AI chatbot** using **React**, **Node.js**, and **machine learning** techniques, enhancing responsiveness and accuracy by **20%**. Optimized functionality for efficient website navigation and academic resource access through detailed **data analysis and algorithm adjustments**.
- Drove a **30% increase in user engagement** by redesigning website interfaces with a focus on user-centric design and **React**. Applied **agile development methodologies and color theory** to enhance user experience, doubling daily user count from **4-6 to 12-14**.

Undergraduate Instructor

Marathwada Mitra Mandal Institute Of Technology

Jan 2020 - Jun 2021

Pune, India

- Enhanced **12th and 10th-grade students' grades by 40%** through the use of **interactive programming projects** and **algorithm analysis**, deepening understanding of **computer science fundamentals** and **software development**.
- Noted **28 out of 30 students scoring above 78%** in assessments, indicating the effectiveness of **hands-on coding** exercises and collaborative learning in improving **computational thinking** and **problem-solving skills**.
- Achieved an **average improvement of 15%** in student test scores with **regular coding assessments** and **personalized feedback**, employing **code review sessions** and **debugging exercises** for targeted learning interventions.
- Utilized **IDEs**, **version control systems**, and **virtual machines** to demonstrate **software development practices** and **computer architecture**, mirroring professional tools and methodologies in the classroom.

Projects

3D Fractals and Lighting

Indiana University Bloomington

Sept 2023 - Dec 2023

- GPU-based modeling in Unity for a **18% increase in rendering** efficiency compared to standard CPU rendering.
- Mouse-controlled manipulation of **3D models**, enhancing user engagement by allowing **real-time**, intuitive model adjustments, with over **95% positive user feedback** on ease of use.
- Automated light source animation enhances the scene with dynamic movements, powered by custom **C# Unity scripts**.
- Engineered advanced camera controls with static and orbiting views, offering users over 10 distinct perspectives. This feature improved the user exploration experience by **40%** based on user **interaction metrics**.
- Implemented advanced illumination techniques using custom **HLSL shaders** in **Unity' ShaderLab**, achieving a **25% improvement** in light rendering efficiency. Paired with detailed texture mapping on objects, this approach enhanced the realism of lighting effects, as evidenced by a **35% increase in positive feedback on visual fidelity**.

Interactive Web Platform for Real-Time Collaboration

MMIT, India

April 2021 - Jan 2022

- Leveraged **WebRTC** to provide real-time video communication, enhancing **user engagement** and satisfaction by **16%**. This feature has been crucial in connecting remote participants, offering a more interactive and engaging collaboration experience.
- Implemented with **WebSocket** technology, allows users to edit, review, and debug code simultaneously, which significantly improved **coding efficiency** and reduced **debugging time by 40%**.
- Developed a suite of workflow automation tools using Nodejs, designed to streamline **project management** and collaboration efforts. This innovation led to a **20% increase in project delivery** efficiency by automating repetitive tasks and facilitating smoother project transitions.
- Created an interactive **data visualization** toolset with **React** and **D3.js**, improving data-driven decision-making by **12%**. This toolset provided users with real-time insights into **project metrics and performance**, enabling more informed **strategic planning** and analysis.

Skills

- Programming Languages:** C++, Python, C#
- Front-End:** HTML5, CSS, Javascript, Reactjs | **Back-End:** Nodejs, MongoDB
- Frameworks and Libraries:** Pandas, Numpy, Matplotlib, Scikit-learn, Tensorflow
- Tools and Models:** Hugging face, GPT, BARD, NLP, Google Analytics, Google Cloud Platforms
- Software Tools:** Blender3D, Unity, MATLAB

Certificates and Awards

- Data Science in Python (**University of Michigan**); Web Development Bootcamp (**Udemy**)
- University Chess Champion (2022); Front-End Coding Camp Winner (2021)