DHRUVISH PAREKH

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EDUCATION

Stevens Institute of Technology – Hoboken, New Jersey, USA *Master of Science in Computer Science* | 3.6

A.D Patel Institute of Technology – Anand, Gujarat, India

Bachelor of Engineering in Information Technology | 8.6

Aug 2020 - June 2024

Expected Graduation: May 2026

RELEVANT COURSEWORK

Data Structures and Algorithms, Algorithms Analysis, Database Management Systems, Web Programming, Mathematical Foundation of Machine Learning, Deep Learning, Operating Systems, Agile Methods for Software Development.

TECHNICAL SKILLS

Languages & Frameworks: Python, C++, Java, TypeScript, JavaScript, SQL, HTML, CSS, React.js, Next.js, Node.js, Express.js, PyTorch, TensorFlow, NLTK, OpenCV.

Databases & Cloud Technologies: PostgreSQL, MongoDB, Firebase, Redis, AWS.

Tools: Docker, WebSockets, Phaser, Jest, Notion, Postman, Git, GitHub, Visual Studio Code, Slack.

RELEVANT EXPERIENCE

StylePick, Co-op Intern - Remote, India

Dec 2023 - April 2024

- Led a team of three to develop a Generative AI virtual try-on system using user images and text preferences.
- Engineered a preprocessing pipeline for stitched clothing with 3+ open-source projects.
- Developed a DALL·E-based text-to-image pipeline for unstitched apparel, improving image alignment with pose detection and body measurements, increasing model accuracy by 5%.
- Documented pipeline architecture and AI integrations for scalability and knowledge transfer.

Tatvasoft, Summer Intern - Remote, India

July 2023 – Aug 2023

- Architected a bookstore app using React.js, integrating a RESTful API for real-time book and customer data retrieval.
- Built a secure payment system with Stripe API, implementing tokenization and encryption for safe transactions.
- Implemented role-based authentication, ensuring secure access control for customers and administrators.
- Deployed microservices architecture using AWS ECS, separating authentication, payments, and API services into
 distinct containers for better scalability and fault isolation, reducing response times by 40%.

ACADEMIC PROJECTS

Office Simulator, Independently Developed

Jan 2025 - Feb 2025

- Orchestrated the development of a real-time multiplayer office simulation supporting 100+ concurrent players, enabling users to join via a code, engage in in-game chat, and use a one-on-one video call feature with WebRTC.
- Designed **server-side caching** to reduce database queries by **40%**, enhancing performance while optimizing **session management** with Redis.
- Enhanced **WebSocket communication** by creating **event-based message handling** and broadcasting only critical updates, ensuring efficient message delivery and system responsiveness.

Photography Spot Finder in NYC, Web Programming 1, Stevens Institute of Technology

Oct 2024 - Dec 2024

- Developed both client-side and server-side functionality for the Photography Spot Finder web app, enabling seamless interactions for over 500 active users to submit, rate, and engage with photography spots.
- Formulated logic to automatically extract the **top 3 rated images** of the month, enrolling them as featured spots for the upcoming month's photo contest, enhancing user participation and engagement.
- Collaborated with a team of 4 to optimize server-side routes for filtering spots based on tags, ratings, and keywords, improving query performance and reducing database load by 30%.

PROFESSIONAL ASSOCIATIONS

- **Vice President, IEEE Power Electronics Society -** Organized technical workshops to enhance student engagement in emerging technologies.
- Machine Learning Lead, Google Developer Student Clubs (GDSC) Conducted hands-on AI/ML training sessions.