Dev Patel

✉ devrpatel26@gmail.com | 📱 +1 (352) 709 8571 | 🔗 dev-patel26 | ⊙ d3v-26 | 🌐 Portfolio

Education

University of Florida — Aug. 2022 - May 2024
Master of Science in Computer Science; GPA: 3.8 / 4.0 — Gainesville, FL, United States

Dharmsinh Desai University — Aug 2018 - May 2022
Bachelor of Engineering in Computer Engineering; CGPA: 8.9 / 10 — Gujarat, India

Relevant Courseworks: Advanced Data Structures, Mathematics of Intelligent Systems, Analysis of Algorithm, Machine Learning, NLP, UI/UX, Programming Language Principles, Computer Vision, Distributed Operating systems

Experience

- **Research Assistant (SMILE Lab)** | *University of Florida, Gainesville, FL* — Dec 2024 - Present
  - Deployed **GRACE, a state-of-the-art brain image segmentation model**, using Flask and Next.js/React, reducing image processing time by 35% and achieving 99% uptime in clinical deployments.
  - Optimized model performance on real-world datasets, **improving segmentation accuracy by 20%** and reducing false segmentation errors by 15% through hyperparameter tuning and efficient Flask-based API deployment.
  - Collaborated with researchers & healthcare professionals to refine the deployment pipeline and provided technical support (Automated logging & monitoring), **cutting troubleshooting time by 40% in clinical settings.**

- **Software Developer** | *Indian Institute of Technology Bombay, Mumbai, India* — Dec 2021 - May 2022
  - Designed a comprehensive **feature-rich Android & iOS application** using **Flutter & Swift** and integrated **Firebase** for real-time **data synchronization**. The app enhances the learning experience & teaching processes across **three distinct languages**, Hindi, Marathi and Sanskrit, encompassing a vast **vocabulary of over 50,000+ words**.
  - Created & optimized **a search index** over the extracted words using **Python and MySQL**. Also fine-tuned the schema, incorporating an **audio-visual layer**, resulting in a reduction of search time by **30%** & an increase in interactivity.
  - **Extracted information on words** with constraints such as proficiency, class, sense, definition, and version from more than 4 different **multi-lingual corpuses** developed and maintained by the **Shabdamitra** team at the IIT Bombay.
  - Utilized **Python and SQL** to implement **machine learning algorithms** for **predictive text** and **language learning insights**, further augmenting the educational utility of the application.

- **Data Analyst** | *Saint Louis University x GlobalShala, Remote* — Oct 2021 - Dec 2021
  - Employed advanced data visualization tools **Tableau and Power BI** and **statistical software R** to **analyze extensive marketing data** from sponsor's advertising campaigns. Focused on uncovering key observations and identifying actionable insights to assist the Finance team in **strategic decision-making**.
  - Calculated a **low click through rate** of 1.2%, **conversion rate** of 3%, and **Return on ad spend** of $4.50.
  - **Overhauled the marketing budget** and improved campaign effectiveness by recommending the **removal of underperforming ad campaigns** which ultimately led to a significant enhancement in the campaign effectiveness.

Projects

- **Blogging Platform using React, TypeScript, Node.js, SQLite**
  - Pioneered a full-stack blogging platform using **React, TypeScript, Next.js, and Node.js,** improving page load speed by 40% with **server-side rendering (SSR)** and dynamic routing enhancing user experience and SEO performance.
  - Engineered a **GraphQL API** reducing data fetching time by 30%, while integrating **SQLite** for lightweight storage and **Contentful CMS** to streamline content management, cutting content update time by 50%.
  - Enhanced user engagement by 25% with Google analytics and A/B testing, incorporating Google Tag Manager, enhancing SEO with **structured metadata and server-side optimizations** for better search visibility.

- **Compact Compiler: Compiler made from scratch with Java and ASM**
  - **Formulated a sophisticated compiler** using **Java & ASM** that reported a 20% reduction in code size & improved execution time by 15%, collectively contributing in a more efficient & streamlined bytecode generation. Added functionality includes **error diagnostics** & **syntax highlighting**, providing a robust development environment.
  - Enforced a comprehensive set of modules in the compiler, resulting in a 95% accuracy rate in producing error-free, robust, reliable and precise **executable bytecode** from **high-level programming language code.**

Skills

- **Languages & Frameworks:** JavaScript (React, Angular, Vue, Node.js, Next.js, Nuxt.js), Python, Java, C++, C#, Dart (Flutter), TypeScript, Ruby on Rails, Django, Flask, ASP.NET Core, HTML, CSS, SASS, SCSS
- **Technologies:** Figma, JavaFX, Azure, AWS, REST/SOAP, DevOps, MLOps, System Architecture, Linux, Hadoop, Git, Express, Bootstrap, LLVMs, CUDA, TensorFlow, PyTorch, Pandas, Numpy, Matlab, Postman
- **Version Control and Virtualization:** Docker, BitBucket, Git, GitHub, Jira
- **Database:** MySQL, PostgreSQL, OpenSearch, SQLite, S3, MongoDB, AWS, GraphQL