Dhruv Bhanderi

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Education

University of Southern California	**Aug 2024 - May 2026**
Master of Science in Computer Science	*Los Angeles,California*
Pandit Deendayal Energy University	**Nov 2020 - May 2024**
Bachelor of Technology in Computer Science and Engineering (CGPA of 9.6/10)	*Gandhinagar, Gujarat*

Skills

Programming Languages: Python, C++, C, Java, Javascript; **Database**: MySQL, PostgreSQL, MongoDB; **Cloud**: AWS
Web Development: HTML, CSS, PHP, Node.js, ReactJS, Flask, Django
AI/ML: Scikit-Learn, NumPy, Pandas, Matplotlib, Tensorflow, Machine Learning (ML), Natural Language Processing (NLP)
Other Skills & Technologies: Data Structures, Algorithms, Linux, Docker, Kubernetes, Tableau, Git, Jira, Excel
Management Skills: Problem Solving, Communication, Teamwork/Collaboration, Adaptability, Time Management, Leadership

Experience

SPIGOT Developers — **Jan 2024 - Jul 2024**
Software Development Engineer — *India*
- Led migration of core payment processing from a third-party service to in-house **micro-services**, utilizing **Node.js** and **Docker**, collaborating with Product Managers to ensure a seamless transition and decreasing licensing costs by 20%.
- Revamped **ReactJS** components using Test-Driven Development (TDD), aligning with software engineering best practices to trim application bundle by 1.2 MB, improving load times by 15%, and enhancing user experience.
- Optimized **AWS** cloud infrastructure with **EC2** for scalable compute and **S3** for storage, applying object-oriented design principles to reduce costs by 15% while maintaining performance.

SPIGOT Developers — **May 2023 - Aug 2023**
Full Stack Developer Intern
- Developed a portfolio website using **Flask** and **AJAX**, enabling dynamic content loading via **RESTful API**.
- Led development of a portfolio website using **Flask**, enhancing team efficiency and site performance by 20%.
- Leveraged Google Analytics for traffic analysis and implemented **SEO** strategies, resulting in a 25% boost in user engagement and 15% uplift in lead conversions, expanding market reach and boosting profitability.

Aasma Technology — **Jan 2023 - Apr 2023**
Web Developer Intern — *India*
- Created responsive web apps with **React.js**, leveraging **Jest** for testing, increasing user engagement by 20%.
- Refined **Node.js** back-end, incorporating secure authentication flows like **OAuth2**, decreasing server response times by 10%, and improving API efficiency.
- Initiated and drove **Agile** practices with cross-functional teams, delivering projects 20% faster.

Projects

Text Summarization System | *NLTK, spaCy, TensorFlow, PyTorch, GPT-3, BERT, mT5, REST APIs* — **Mar 2023**
- Spearheaded the development of a high-performance text summarization system, using **mT5** for multilingual text analysis and fine-tuning **GPT-3** and **BERT** models to deliver concise and contextually accurate summaries.
- Enhanced system efficiency by 20% through optimized preprocessing with **spaCy** and **NLTK**, and enhanced model performance using **TensorFlow** and **PyTorch** to handle large-scale datasets in real time.
- Integrated **REST API** and **GitHub**, improving external access and collaboration, boosting efficiency by 30%.

Operating System Web Application | *HTML5, CSS3, JavaScript(ES6+), C++, BootStrap, Heroku* — **Jan 2022**
- Developed a responsive web app showcasing OS algorithms, adjusting backend logic in **C++** for better performance.
- Improved algorithm efficiency by 30% with **Objective-C** and **JavaScript** for asynchronous rendering.
- Deployed via a **CI/CD** pipeline on Netlify, ensuring smooth updates and cross-device compatibility with **Bootstrap**.

Neural Machine Translation System | *NLLB, mBERT, Flask, PostgreSQL, Docker* — **Mar 2023**
- Led the development of a machine translation system using **NLLB** and applied object-oriented design principles with **PyTorch**, achieving a 30% improvement in translation accuracy for Saurashtra and Standard Gujarati.
- Integrated Hugging Face's transformer models to compare **NLLB** with **mBERT**, with NLLB outperforming mBERT by 20% in handling the unique linguistic features of the Saurashtra dialect.
- Built a scalable **Flask** API for real-time translations using **PostgreSQL** and **Docker** for seamless scaling.

Amazon Price Alert System | *Python, AWS Lambda, Amazon API, SMTP, Pandas* — **May 2022**
- Independently designed and implemented a **Python**-based script for monitoring of 500+ Amazon product prices.
- Synchronized Amazon's API with **AWS Lambda** to monitor prices at 30-minute intervals.
- Automated email alerts using **SMTP** when prices fell below threshold, elevating purchase efficiency by 25%.