

Bhuvan Shah

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EDUCATION

University of Southern California

Master's of Science in Computer science

Los Angeles, CA

May 2025

Indus University

Bachelor's of Technology in Computer Science and Engineering

India

July 2019 - May 2023

TECHNICAL SKILLS

Languages: JavaScript, Java, TypeScript, React.js, Node.js, SpringBoot, Python, C++, C#, Angular, SQL, HTML

Technology: Git, Power BI, Container, Flask, BigQuery, GraphQL, Django, Linux, GCP, AWS S3, Azure, MySQL, NoSQL, MongoDB, Hadoop, TerraForm, Kubernetes, Data Structures, CI/CD pipelines & workflows

EXPERIENCE

Graduate Teaching Assistant

May 2024 – Present

University of Southern California

Los Angeles, CA

- Coordinate **360+** students in advanced game development for **object-oriented programming** and **algorithm optimization** in **C#, Python, and R**—resulting in 90% of teams publishing games with **scalable architectures**
- Design **6+ coding assignments** integrating **Firebase for real-time analytics**—enabling students to **track 10,000+ gameplay events** per project and make data-driven design decisions with **Agile methodologies**
- Evaluate and refine student game builds by **analyzing performance metrics** and debugging issues, leading to a **30% average improvement** in game stability and efficiency before final publication

Data Scientist Intern

December 2022 – May 2023

Prompt Softech

India

- Impacted 12 traders by attaining **93% accuracy** with a **custom LSTM neural network** with bifurcated architecture using **stock prices** and **Twitter sentiment polarity**
- Enhanced **data processing efficiency** by **35% reduction** in retrieval time, by operating **Hadoop** for managing datasets over **50 GB**
- Boosted **trading profits to over \$1200** as measured by profit increase, by optimizing trading strategies with **Apache Spark** for **real-time processing** and model validation alongside **MQL4/MQL5 backtesting**

Data Analyst Intern

June 2021 – July 2021

Tornado Computers

India

- Attained **92% accuracy** in **performance analysis** by leveraging **Apache Kafka** for **real-time data streaming** and **IoT integration**, improving hardware performance and predicting system failures
- Decreased **downtime and repair costs by 87%** through implementing a **neural network on TensorFlow** for predictive maintenance, processing sensor data with **Apache Airflow** to **automate data pipeline** orchestration

Software Developer Intern

June 2020 – October. 2020

VueInternational

India

- Delivered a **15% increased business impact** by designing and executing interactive components with **React, Tailwind CSS, Node.js, and Express.js**, while incorporating **Redis for efficient data caching** and **MongoDB for data retrieval**
- Strengthened **transaction security by 20%** through **Docker-containerized Stripe API** integration for secure transactions

PROJECTS

NoteScape | *React.js, Node.js, D3.js, Docker, Neo4j, FastAPI, Python*

February 2025 - Ongoing

- Architected a **full-stack** knowledge management application leveraging **React.js** and **FastAPI**, reducing **development time by 30%** through effective component reuse and **API standardization**
- Enhanced **graph rendering performance by 75%** by implementing **custom WebGL-based rendering** for large datasets, enabling smooth interaction with **graphs containing 2000+ elements**

SpotifyDash: macOS Widget | *Swift, Rest API, WidgetKit, OAuth2, JSON*

January 2025 – March 2025

- Developed a responsive **macOS widget application** using **Swift** and **WidgetKit**, constructing a fault-tolerant system with **95% reliability** during API outages via a hybrid API and AppleScript architecture
- Devised **cross-process data synchronization** using custom serialization techniques and FileManager API, enabling **real-time UI updates within 1 second** of state changes while maintaining **thread safety across components**

Real-time Document Collaboration Platform | *MERN stack, Socket.IO, JWT*

July 2024 – September 2024

- Implemented **distributed system architecture** using **Node.js, Express.js, and GraphQL**, ensuring efficient end-to-end data synchronization, **handling 200+ concurrent editing sessions** leading to **85% reduction in document merge conflicts**
- Developed **authentication system** using **MongoDB and JWT**, managing granular **access permissions for 1000+ shared documents**, while maintaining real-time collaboration features with **99.9% system availability**

Forecast Finesse | *MERN Stack, MongoDB, Azure, D3.js*

December 2022 – May 2023

- Directed a **team of 4** to architect a **real-time financial dashboard** using the **MERN stack**, merging live stock prices through REST APIs, and visualizing data with **D3.js for interactive graphs**, resulting in a **35% boost in user engagement**
- Utilized **AWS S3 for secure, distributed storage** of stock data, with **retrieval across multi-region buckets**, leveraged **Azure for cloud hosting**, achieving **99.9% uptime** while optimizing performance and **reducing API response times by 40%**