

# Vatsal Unadkat

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## Education

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### VIT Bhopal University

BTech in Computer Science and Engineering (CGPA: 8.25)

Bhopal, Madhya Pradesh

2022- 2026

### G.T Sheth School

12<sup>th</sup> State board (77%)

Rajkot, Gujarat

2021-2022

### Saint Paul's School

10<sup>th</sup> ICSE (89%)

Rajkot, Gujarat

2020 – 2021

## Projects

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### Voyage Vista – A Tour Website ([GitHub](#))

Feb 2024 – May 2024

- Designed and deployed *Voyage Vista*, a full-stack travel website, leveraging **React**, **Node.js**, and **RESTful APIs** to handle over **1,000** potential user interactions daily, streamlining travel planning for users across 3+ key features: **destination exploration**, **accommodation booking**, and **itinerary planning**.
- Processed a robust backend with modular Node.js architecture, integrating **3 third-party APIs** (e.g., payment systems, diagnostic tools) to ensure **seamless transactions** and accurate data exchange, while delivering the project within a **6-month Agile sprint timeline**.
- Developed a system to serve as gateways to adventure, offering a glimpse into the vast array of experiences awaiting travellers. Provided detailed information on over **100 destinations**, **200+ accommodations**, and **50+ itineraries**.

### AWS Billing Machine ([GitHub](#))

Nov 2024 – Dec 2024

- Proposed a scalable billing engine for an **IaaS platform** in **C++**, processing resource usage data from multiple regions to **generate monthly customer bills** efficiently.
- Implemented support for **free-tier eligible EC2 instances** and reserved instances, optimizing cost calculations and ensuring accurate billing.
- Enhanced the application to handle reserved instance billing, **achieving 20% cost reduction** by implementing a module to calculate discounts for long-term EC2 usage and integrating **elastic IP usage tracking**.

## Experience

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### Tark Technologies | Software Development Intern ([Certificate](#))

Oct 2024 - Dec 2024

- Developed an **AWS Billing Engine** in **C++**, leveraging AWS resource, usage, and pricing APIs to generate detailed monthly itemized bills for clients across multiple global regions, processing over **750 usage hours** and ensuring accuracy in **cloud cost tracking**.
- Designed and implemented a **Train Ticket Reservation System** in **C++**, utilizing object-oriented programming principles to handle **seat allocation**, ticket booking, **waitlist management**, and real-time availability updates, **improving system efficiency by 20%**.
- Applied advanced C++ programming techniques to design robust and **scalable software solutions**, contributing to system architecture and implementation for **enterprise-grade applications**, delivering two projects within a **three-month timeline**.

## Technical Skills

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- Languages:** C++, Python, SQL (MySQL), JavaScript, HTML/CSS.
- Technologies:** React, Node.js, Express.js, Mongoose, MongoDB.
- Concepts:** Analytical thinking, Object-oriented programming (OOPS), Data Structures and Algorithms (DSA), Functional Programming, REST API, AWS Cloud, Kali Linux.
- Developer Tools:** Git, GitHub, VS Code, Visual Studio, PyCharm.
- Profiles:** [LeetCode](#), [Code360](#), [GitHub](#).

## Achievements | Certifications

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- Secured a **3rd position** in the “Mission Impossible – Code protocol” Hackathon Conducted by the AI club of VIT Bhopal, [Contributed](#) in the Girl Script Summer of code 2024(GSSoc'24).
- Event management lead** of the Open-Source Club and **core team member** of the Ramanujan math's Club at VIT Bhopal University.
- Participated in the Flipkart Grid Hackathon 6.0, Adobe Hackathon, Walmart Sparkathon, and HackOn with Amazon.
- Certifications:** AWS Academy | [Cloud Architecting](#), AWS Academy | [Cloud Foundations](#), Coursera – Google | [The bits and bytes of Computer Networking](#), NPTEL | [Cloud Computing](#)