

Oysturn Vas

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Education

University Of Waterloo (Dean's Honors, CGPA: 89%)

Jan 2024 – Dec 2025

Master of Engineering in Electrical and Computer Engineering

Waterloo, ON

Coursework: Data-Intensive Distributed Computing, Human-Computer Interaction, Reconfigurable Computing, Wireless Sensor Network, Data & Knowledge Modelling & Analysis, Intro to Machine Learning, Machine Learning for Chip Design

Experience

Software Developer

Oct 2024 – March 2025

VoiceQube Inc

USA (Remote)

- Integrated advanced AI voice technologies including **Anthropic APIs** for intent detection, **ElevenLabs APIs** for custom voice synthesis, and conversational AI modules, increasing user engagement by **30%**.
- Engineered scalable backend systems with **NestJS**, **AWS (EC2, Lambda, MediaConvert, CloudFront)**, **MongoDB**, **Redis**, and **WebSockets**, delivering real-time APIs, GPS tracking, and high-performance caching to support low-latency, location-based services for **1K+** users.
- Optimized media, authentication, and deployments by configuring **Stripe**, **Calendly**, **Brevo** integrations, building **OAuth (Google, Apple, Facebook)** authentication, leveraging **Maizzle** for email workflows, and deploying via CI/CD pipelines, **CodeCommit**, and **GitHub Actions**, reducing release cycles from **2 weeks to 2 days**.
- Skills:** NestJS, Node.js, AWS (EC2, Lambda, EBS, CloudFront, Route 53, MediaConvert, CodeCommit), MongoDB, Redis, WebSockets, OAuth, Stripe, Anthropic API, ElevenLabs API, GitHub Actions

Technical Consultant

Aug 2023 – Sep 2024

PPL Goa

India

- Spearheaded the end-to-end development of systems, architected with **CodeIgniter (MVC)**, **PHP**, **MySQL**, **AWS RDS**, and **AWS S3**, supporting secure onboarding, management, and efficient workflows, cutting time by **40%**.
- Built and optimized features including advanced search, dynamic profiles, and mobile-responsive UI using **Webpack**, **React**, **Bootstrap**, **SCSS**, **jQuery**, **Google Maps API**, reducing load time by **30%**.
- Deployed and scaled the platform on **AWS cloud** infrastructure with CI/CD, CDN integration, caching strategies, performance monitoring, and multi-environment support, ensuring **99.9%** uptime for **2K+** active users.
- Skills:** PHP, CodeIgniter, MySQL, AWS RDS, AWS S3, Webpack, Babel, Bootstrap, SCSS, jQuery, Google Maps API, Cashfree, Instamojo, JWT, REST APIs, Cloud Architecture

Projects

Machine Learning for CTLE Circuit Generation | *Github*

- Developed and optimized machine learning models to accelerate chip design by predicting key performance metrics for Continuous-Time Linear Equalizer (CTLE) circuits.
- Engineered a Python-based data pipeline for robust preprocessing, outlier handling, and feature engineering; trained and fine-tuned XGBoost, LightGBM, and Deep Neural Networks (DNNs) for high prediction accuracy.
- Skills:** Python, Pandas, Scikit-learn, TensorFlow, Keras, XGBoost, LightGBM, Data Engineering, ML for EDA

Smart Charging Nodes for Shared EVs |

- Architected a scalable IoT network of blockchain-secured smart charging nodes, enabling tamper-proof billing with Hyperledger Fabric.
- Designed a low-latency MQTT-based communication layer between a central cloud server and Raspberry Pi-powered charging nodes, ensuring real-time monitoring and control.
- Skills:** IoT Systems, Hyperledger Fabric, Blockchain, MQTT, Raspberry Pi, Edge Computing, Distributed Systems

Technical Skills

Languages: Python, C, C++, HTML, CSS, JavaScript, TypeScript, PHP, Bash, SQL, Haskell, Java, Scala, Go

Databases: Postgres, NoSQL, MongoDB, MySQL, Redis

Technologies & Tools: ReactJS, NodeJS, NestJS, Pytorch, CodeIgniter, TensorFlow, Keras, Scikit-learn, XGBoost, LightGBM, LangChain, LangGraph, LangSmith, Lovable, Cursor, N8N, Claude, Gemini, Hadoop, Apache Spark, AWS, Docker, Figma, Trello, Jira, Git, GitHub, GitLab, Numpy, Pandas, Postman, Bootstrap, WebSockets

Publications

- Co-Authored, “Hyperlocal marketplace – transforming unorganized localized marketplace with future tech”, IEEE ICAC3N 2023, DOI: 10.1109/ICAC3N60023.2023.10541378 | (Link)**