

Jai Vignesh Ravichandran

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Education

Northeastern University

Masters in Software Engineering Systems (GPA: 3.76 / 4.00)

Sep 2024 - May 2026

Boston, Massachusetts

Anna University

Bachelor of Technology in Computer Science and Business Systems (GPA: 8.7 / 10.00)

Sep 2020 - May 2024

Chennai, India

Technical Skills

Languages	C++, Java, Python, JavaScript, TypeScript, Dart
Frameworks & Libraries	Node.js (Express, Sequelize, Jest), Flask, React, Next.js, Flutter, Redux Toolkit, Tailwind CSS, Bootstrap
Databases & BI Tools	MySQL, PostgreSQL, MongoDB Atlas, Firebase (Firestore/Realtime DB), SSIS, Power BI
Cloud & DevOps	AWS (EC2, Lambda, DynamoDB, S3, RDS, CDK), GCP, Terraform, Packer, Docker, GitHub Actions (CI/CD), Linux shell scripting, WebSockets, StatsD
Practices & Tools	Git, RESTful API design, JWT, Agile/Scrum

Work Experience

Sagitec Solutions Pvt Ltd

Sep 2022 – Nov 2022

Data Analyst Intern

Chennai, India

- Executed ETL pipelines using **SQL Server Management Studio (SSMS)**, **SQL Server Integration Services (SSIS)** & **T-SQL**, with data extraction, validation, reconciliation and migration across benefit-administration systems to ensure data integrity.
- Automated SSIS packages to generate daily Excel reports, reducing manual reporting effort by ~50% and guaranteeing consistent, on-time delivery of key metrics to stakeholders.
- Designed interactive dashboards in **Power BI** to visualize validation results and data trends; led comprehensive testing, documentation and cross-functional troubleshooting to rapidly resolve anomalies.

Projects

Sphere | *React, Node.js, Express.js, MongoDB Atlas, HTML5/CSS3, JWT, RBAC, NodeMailer*

[Code](#) — [Demo](#)

- Architected and deployed RESTful APIs with **Express.js** and **Mongoose** on **MongoDB Atlas** to power CRUD workflows for marketplace listings, event registrations, club/community management, social feeds and job/gig postings; integrated **NodeMailer** to automate transactional emails (registration confirmations, event reminders, password resets).
- Enforced enterprise-grade security using **JSON Web Tokens** and **Passport.js** middleware to implement **role-based access control** (admin vs. student), safeguarding endpoints for event/club administration and job board management.
- Developed a **React** single-page application with functional components, **React Router** and **Context API** for seamless navigation; embedded an AI chatbot microservice (OpenAI API) to deliver real-time assignment assistance within the platform's social feed.

Cloud Web Application | *Node.js, Sequelize, Terraform, Packer, AWS, GitHub Actions, Jest, Shell Scripting*

[Code](#) — [Demo](#)

- Architected a cloud-native backend with **Node.js** and **Sequelize ORM**, developing RESTful health-check & core application APIs, and provisioning AWS infrastructure—**EC2**, **RDS**, **VPC**, **S3**, **Route 53**, **KMS/Secrets Manager**—via **Terraform**, **Packer** and **shell scripts**.
- Implemented end-to-end CI/CD with **GitHub Actions**, integrating **Jest** for unit and integration tests and **Packer** for AMI baking, automating deployments and launch template updates on every push.
- Configured an **AWS Elastic Load Balancer** with **CloudWatch** & **StatsD** monitoring and **Auto Scaling Group** policies to dynamically scale **EC2** instances based on real-time demand.

V-Connect Admin / V-Connect | *Flutter, Dart, Firebase*

[Code](#) — [Demo](#)

- Engineered a cross-platform **Flutter** app with **Firebase Authentication** (secure sign-in, password reset) and **FCM push notifications**, serving 400+ NSS volunteers with real-time event alerts.
- Implemented dual admin & volunteer workflows: **attendance tracking**, **event creation & RSVP**, automated **service-hour monitoring** via **Firebase Realtime Database**, and volunteer selection dashboards.
- Developed **Firebase**-backed modules for **blood-donor search** by group and an organized **event photo gallery**, digitizing volunteer records and streamlining logistics for campus outreach and donation camps.

Phaila | *Flutter, Dart, Firebase*

[Code](#) — [Demo](#)

- Awarded **1st Prize** at Smart India Hackathon for developing a cross-platform e-commerce solution using Flutter and Firebase, empowering Self-Help Groups with digital storefronts.
- Integrated **Firebase Authentication**, **Cloud Firestore**, **Firebase Storage** and **GeoFirestore** to ensure secure sign-in, real-time data sync, efficient media storage and location-based product discovery.
- Designed intuitive Flutter UI/UX flows for product catalog browsing, shopping cart management and checkout, streamlining transactions for women entrepreneurs.

Research & Activities

Smart India Hackathon

Awarded **1st Prize** by the Ministry of Rural Development, Government of India for developing *Phaila*, a Flutter-Firebase e-commerce solution for Self-Help Groups.

App Frenzy Award

Received **Best App** recognition for *V-Connect*, a volunteer management app built with Flutter and Firebase.

Best NSS Coordinator

Recognized for coordination of NSS events and volunteer initiatives, boosting participation and impact.

IEEE Publication

Published "Cardiovascular Disease Prediction Using Randalistic" in *IEEE Xplore*, indexed by Scopus.