

# HETAV SHAH

Full-Stack Developer | Applied ML | Real-Time Systems

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Portfolio: [Portfolio](#)

## PROFESSIONAL SUMMARY

FULL-STACK DEVELOPER SKILLED IN REACT, FIREBASE, AND APPLIED MACHINE LEARNING WITH HANDS-ON EXPERIENCE BUILDING PRODUCTION-READY WEB APPLICATIONS, REAL-TIME COMMUNICATION SYSTEMS, AND CHATBOT WORKFLOWS. DELIVERED SECURE AUTHENTICATION, UI/UX IMPROVEMENTS, AND BACKEND INTEGRATION DURING INTERNSHIP AT NTS GLOBAL NIHON. STRONG IN TRANSLATING REQUIREMENTS INTO MODULAR SYSTEMS, DEBUGGING COMPLEX FLOWS, AND SHIPPING RELIABLE FEATURES IN CROSS-FUNCTIONAL TEAMS.

## TECHNICAL SKILLS

**LANGUAGES:** JAVASCRIPT, PYTHON, C++, JAVA, SQL

**FRONTEND:** REACT, NEXT.JS, TAILWIND CSS, HTML/CSS

**BACKEND:** NODE.JS, EXPRESS.JS, FIREBASE (AUTH, FIRESTORE, HOSTING), REST APIs

**MACHINE LEARNING:** SCIKIT-LEARN, TENSORFLOW, PYTORCH, MEDIAPIPE, OPENCV

**SYSTEMS / NETWORKING:** SOCKET.IO, CN FUNDAMENTALS, BASIC PENTESTING

**TOOLS:** GIT, GITHUB, POSTMAN, VS CODE, GOOGLE COLAB, JUPYTER NOTEBOOK

## EXPERIENCE

### FULL-STACK DEVELOPER INTERN (TEAM LEAD)

NTS GLOBAL NIHON · REMOTE · JUN 2025 – AUG 2025

- ENGINEERED FIREBASE-BASED BACKEND SYSTEMS INCLUDING AUTH, FIRESTORE RULES, AND SECURE SESSION FLOWS.
- REDESIGNED AUTHENTICATION & ONBOARDING LOGIC, IMPROVING STABILITY AND REDUCING LOGIN-RELATED ISSUES.
- LED DEVELOPMENT OF KAAMIGO CHATBOT MODULES—INTERACTION FLOWS, INFERENCE INTEGRATION, AND UI COORDINATION.
- BUILT REAL-TIME CHAT FEATURES WITH MESSAGE PERSISTENCE AND USER ACTIVITY SYNC ACROSS DEVICES.
- CONTRIBUTED TO TEAM GIT WORKFLOWS, CODE REVIEWS, AND FULL-STACK DEVELOPMENT ACROSS WEB + MOBILE.

## PROJECTS

### VAQUAH — FULL-STACK AC SERVICES PLATFORM | REACT, FIREBASE, TAILWIND

LIVE: [VAQUAH.IN](http://VAQUAH.IN)

- BUILT AND DEPLOYED A PRODUCTION PLATFORM WITH PRODUCT CATALOG, SERVICE BOOKING, AND ADMIN DASHBOARDS.
- IMPLEMENTED FIREBASE AUTH + FIRESTORE WITH ROLE-BASED ACCESS RULES FOR SECURE OPERATIONS.
- DESIGNED RESPONSIVE UI OPTIMIZED FOR MOBILE-FIRST USERS IN SERVICE WORKFLOWS.

### SMART DELIVERY DRONE PATH-FINDER SIMULATION | PYTHON, A\*, DIJKSTRA, VISUALIZATION

- CREATED A MODULAR PATH-FINDING ENGINE FOR DENSE OBSTACLE GRIDS USING A\*, DIJKSTRA, AND HEURISTIC TUNING.
- ADDED VISUAL PLAYBACK, ROUTE COMPARISON, AND MODULAR SOLVER ARCHITECTURE FOR FUTURE REAL-DRONE INTEGRATION.

### SPAM EMAIL DETECTION SYSTEM | PYTHON, SCIKIT-LEARN, TF-IDF

- BUILT SPAM CLASSIFIER USING NAIVE BAYES, SVM, AND DECISION TREES WITH TF-IDF VECTORIZATION.
- PERFORMED MODEL COMPARISON AND OPTIMIZATION FOCUSING ON REDUCING FALSE POSITIVES.

### HETCHAT — REAL-TIME CHAT APPLICATION | REACT, SOCKET.IO, FIREBASE

- IMPLEMENTED ROOM-BASED MESSAGING, ONLINE PRESENCE TRACKING, AND RECONNECTION LOGIC.
- ENSURED IDENTITY VALIDATION BEFORE WEB SOCKET HANDSHAKE AND OPTIMIZED MESSAGE PERSISTENCE.

### SIGN2TEXT — GESTURE-TO-TEXT SYSTEM | MEDIAPIPE, CNN-LSTM

- BUILT GESTURE RECOGNITION PIPELINE USING MEDIAPIPE LANDMARKS + A CNN-LSTM SEQUENCE MODEL.
- USED SMOOTHING/WINDOWING TO GENERATE STABLE REAL-TIME TEXT OUTPUT FROM HAND SIGNS.

## ADDITIONAL MINI PROJECTS

SPAM URL DETECTOR · MICROKERNEL PROCESS SIMULATION · ADMISSION PORTAL (DBMS) ·

UNDERWATER DATAFLOW SIMULATION · STATIC E-COMMERCE SITE · HARZINO ANIMATED BLOG APP

## EDUCATION

INTEGRATED B.TECH (CSE) + MBA

INSTITUTE OF TECHNOLOGY, NIRMA UNIVERSITY, AHMEDABAD · EXPECTED 2028

CGPA: 7.15 / 10

## LANGUAGES

ENGLISH, HINDI, GUJARATI

## CERTIFICATIONS

C PROGRAMMING (COURSERA) · FRONTEND DEVELOPMENT WITH REACT, TYPESCRIPT & TAILWIND

## INTERESTS

EXPERIMENTING WITH EMERGING TECH, PROTOTYPING SYSTEMS, DEBUGGING + OPTIMIZATION.