Rudra Keshwani

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PROFESSIONAL SUMMARY

Agentic AI and full-stack engineer building LLM-driven systems and geospatial products. Agentic AI Systems Intern at ChatStat, developing autonomous AI workflows, and builder of intelliGIS Marine, where an LLM plans and a deterministic spatial engine computes. Has built and published nine web and desktop projects with TypeScript, Next.js, React, Python, Prisma, PostgreSQL, Redis and mapping libraries (MapLibre, Leaflet, Mapbox, CesiumJS), deployed on Vercel and Netlify. Studying IT (Artificial Intelligence major) at QUT, with a founder's bias for shipping.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, SQL (incl. PL/pgSQL), HTML, CSS

Frameworks & UI: Next.js (App Router), React, Tailwind CSS, Vite, PySide6 / Qt, Zustand, TanStack Query

AI & LLM: Agentic AI workflows, LLM planning pipelines, OpenAI API, NVIDIA NIM, AI chat assistants, AI provider abstraction with mock fallback, AI coding tools

Geospatial & visualisation: MapLibre GL JS, Turf.js, Leaflet, Mapbox, CesiumJS, Folium, Matplotlib, Recharts, GeoJSON, H3 indexing, CRS reprojection

Data & backend: Prisma, PostgreSQL, SQLite / LibSQL, Redis, Auth.js, server-sent events (real-time streaming), REST APIs (TfL Unified API, adsb.lol, OpenSky), GTFS, OpenStreetMap, AIS data, database design

DevOps & tools: Docker / Docker Compose, Git & GitHub, Vercel, Netlify, ESLint, Prettier

Testing & QA: Vitest smoke tests, QA of AI-driven workflows, defect logging, reproduction and fix verification

TECHNICAL PROJECTS

IntelliGIS Marine | *AI-native marine GIS* — Website | GitHub

- LLM parses plain-language questions (English or Chinese) into a typed, validated DAG of geoprocessing operators that a deterministic engine executes, so geometry is computed, never generated; every answer carries uncertainty bounds, provenance and a replayable pipeline.
- Static validator type-checks units, CRS and vertical datums, inserting missing reprojection (WGS84 to CGCS2000) and datum-harmonisation steps before execution.
- Live South China Sea digital twin: AIS trajectories compressed into stop/move segments and H3-indexed density surfaces, five autonomous monitors (e.g. MPA intrusion, AIS dark vessels) and an embeddable POST /api/v1/plan endpoint.
- **Stack:** LLM planner, deterministic geoprocessing engine, H3, AIS, CGCS2000, REST API, Netlify

IntelliGIS (original MVP) | *AI urban planning prototype* — Legacy site | GitHub

- Natural-language master-plan generation: draw a boundary, enter a prompt or preset, and AI-generated layers animate onto the map with summary metrics, construction timeline and PNG/JSON export.
- Pluggable AIProvider interface (NVIDIA NIM, OpenAI) with provider priority and a mock fallback so the demo always works.
- **Stack:** Next.js, TypeScript, Tailwind, MapLibre GL JS, OpenStreetMap tiles, Turf.js, Zustand, OpenAI API, NVIDIA NIM, Netlify

FlightRadar67 | *Real-time aviation radar* — Website | GitHub

- Full-screen CesiumJS globe ingesting live ADS-B data from adsb.lol (OpenSky and simulator fallbacks), streamed over server-sent events with client-side interpolation between ticks.
- Dense-marker performance via canvas billboards with heading rotation, viewport downsampling and label budgets; Redis (or in-memory) caching on flight and statistics APIs.
- Auth.js credentials and OAuth-ready login, favourites, flight detail charts with playback, airport boards, analytics and a "RadarAI" chat assistant (POST /api/ai/chat).
- **Stack:** Next.js 15, TypeScript, Tailwind CSS, CesiumJS, Auth.js v5, Prisma, PostgreSQL, Redis, TanStack Query, Zustand, Recharts, Docker Compose, Netlify

Global Startups Bubble Maps | *Curated startup ecosystem map* — Website | GitHub

- Map-first app where hub markers expand into logo bubbles with a detail panel per startup; curated JSON seed data merged with database-backed suggestions.
- Public suggestion form feeding a password-protected admin approval queue with encrypted sessions; initials-avatar fallback for broken logos; Vitest smoke tests.
- **Stack:** Next.js 16 (App Router), React 19, TypeScript, Tailwind CSS, Leaflet, Prisma + SQLite / LibSQL, Vitest, Netlify

World Metro Visualiser | *Interactive transit data map* Website | GitHub

- Metro systems in 111 cities on a Mapbox globe with schematic GeoJSON line overlays, an info panel, top-10 chart, play/scrub timeline sorted by network length and keyboard controls.
- Data pipeline fetching per-city line geometry from GTFS feeds, the TfL Unified API and OpenStreetMap, with parallel workers and automatic retries, into a generated city manifest.
- **Stack:** TypeScript, JavaScript, Vite, Mapbox, GeoJSON, GTFS, OpenStreetMap, Netlify

Airline Data Explorer | *Aviation analytics desktop app* GitHub

- Desktop analytics app combining real fleet and order data, OpenFlights routes and aircraft photos: overview dashboard, OEM breakdowns and an airline-focus view with a click-to-highlight route map.
- **Stack:** Python, PySide6 (Qt WebEngine), Matplotlib, Folium, OpenFlights data

Leap Ahead | *UQIES × January Capital × Lovable Hackathon 2026* Website | GitHub

- AI career guidance web app with "Jumpy", an AI companion offering personalised course and career pathways, skill gaps and opportunities, plus a student hub with progress stages and weekly to-dos.
- **Stack:** TypeScript, SQL (PL/pgSQL), Vercel

Arya Clark Luxury Real Estate | *Client marketing site* Website

- Marketing site for a luxury real estate agent with hero storytelling, featured estates, property browse, map and market appraisal booking.
- **Stack:** Web front end deployed on Vercel

Personal Website | *Portfolio* Website | GitHub

- Raycast-inspired portfolio with a command palette, projects bento, resume, travel map, blog and guestbook.
- **Stack:** Next.js 15 (App Router), TypeScript, Tailwind CSS, Vercel

EXPERIENCE

ChatStat *April 2026 – Present*

Agentic AI Systems Intern *August 2026 – Present*

- Develop agentic AI systems and autonomous workflows for children's online safety and intelligent automation, refining them to improve system reliability.
- Prototype and experiment with emerging AI architectures in real-world applications.

Quality Assurance Intern *April 2026 – July 2026*

- Tested features and AI-driven workflows before release; logged and tracked defects, reproduced issues with engineers and verified fixes.

Technical Co-founder | unpaste.ai *January 2026 – June 2026*

- Led technical vision and system architecture for an AI-driven automation company serving business clients.
- Designed, built and deployed AI-powered workflow automation end to end, from architecture design to hands-on coding, automating routine business processes.

Startup Founder | intelliGIS marine *June 2026 – Present*

- Design and develop the platform from concept to MVP with modern AI and full-stack technologies, integrating geospatial datasets, mapping tools and large language models.

Campus Impact Leader | Base44 (QUT) – AI no-code prototyping *September 2026 – Present*

Secretary | QUT The Emerging Coders Hub (TECH) – help organise workshops and hackathons *February 2026 – Present*

EDUCATION

Queensland University of Technology (QUT) – Bachelor of Business / Bachelor of Information Technology

*Majors: **Artificial Intelligence (IT)**; Entrepreneurship (Business)* *February 2026 – December 2029*

Units completed: IFB102 | IFB103 | IFB104 | IFB105 | BSB105 | BSB107 | BSB108 | MGB161

Technical units: Intro to Computer Systems, IT Systems Design, Intro to Programming, Database Management

BSB50120 Diploma of Business | Get Set Education – Credential ID: 11907942-7747750 *February 2024 – May 2025*

Mansfield State High School – QCE and ATAR, Queensland curriculum *January 2020 – December 2025*

ACHIEVEMENTS

QUT Excolo! Student Founder Prize – **Made it to semifinals** (one of 15 semifinalists) *October 2026*

10th China (Shenzhen) Innovation & Entrepreneurship Int'l Competition – **Made it to semifinals** (Australian division) *September 2026*

HKUST (Hong Kong) x Sino One Million Dollar Entrepreneurship Competition – **Made it to preliminary filtering interview** *July 2026*

HKUST (Guangzhou) Startups@Guangzhou – **Made it to preliminary filtering interview** *July 2026*

Shanghai Pudong International Entrepreneurship Cup – **Made it to preliminary filtering interview** *July 2026*

Completed YC Startup School