Dean Tresadern

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Self-motivated full stack engineer with a keen interest in 3D graphics, interactive design and AI/ML integration. Strong track record of research-driven feature development and deployment. With a technical and creative mindset I leverage multiple disciplines to bring a unique approach to addressing user needs and business goals.

Skills

Backend & Database
Ruby on Rails, Python, PostgreSQL

Frontend & Graphics
JavaScript, HTML5, CSS3, Tailwind CSS, ThreeJS, WebGL, GLSL, JQuery

AI & Machine Learning
Flux, ChatGPT, Gemini, Replicate.com, self-hosted GPU instances, Stable Diffusion, ComfyUI workflows, custom API integration, prompt engineering & research

DevOps & Cloud
Heroku, Render, Google Cloud Compute, AWS S3, Cloudflare CDN, CircleCI, GitHub Actions

Tools & Practices
Git, RSpec, RESTful API design, webhook integrations, microservices architecture, distributed systems

Additional
3D modeling, hardware troubleshooting, PC building, Game development (Web, Unity, Unreal Engine, Godot)

Professional Experience

Resi — London, UK (Hybrid)   Jan 2020 - Present

Full Stack Engineer — March 2022 - Present

- **3D Property Configurator:** Designed and built custom configurator from scratch using ThreeJS, providing interactive visualizations for property and extension designs and materials, with dynamic lighting and environment.
- **AI Image Generation Pipelines:** Designed and implemented end-to-end pipeline integrating Stable Diffusion, ComfyUI, Flux, and GPT models, transforming customer photos and revit wireframes into photorealistic renderings, adopted by internal design teams and used for our project portfolio.
- **Self-Hosted Infrastructure:** Deployed AI infrastructure on Google Cloud Compute instances, building custom APIs and webhook integrations between ComfyUI workflows and production Rails applications.
- **Multi-service Architecture:** Contribute and maintain multiple services using Rails and Python with distributed databases, handling workflow automation, data processing, and third-party integrations.
- **Full Stack Development:** Implementing end-to-end features across backend and frontend with using bespoke design & component system as well as Tailwind CSS.
- **CI/CD & Testing:** Monitor and maintain pipelines using CircleCI, GitHub Actions wand RSpec test suites, ensuring reliable deployment across multiple production environments on both Heroku and Render.

Appointments, Account Management & Operations — January 2020 - March 2022

- Managing end-to-end customer journey through sales, design, planning and building regulation teams. Coordinating between clients, internal teams and third parties (case officers, suppliers, contractors).
- Produced service quotes, identified upselling opportunities, and trained new staff on internal processes.

Road Management Services (A13) PLC   Sept 2016 - Aug 2019

Availability Technician & Admin Assistant

- Operated VDU systems for real-time network monitoring and incident response, coordinating with tunnel control, law enforcement, contractors, and insurance companies.
- Analyzed operational data and continuously improved manual workflow processes for efficiency optimization.
- Developed efficient archival and data retrieval processes for historical records management.

Halfords   April 2017 - May 2021
Bicycle Technician (Cytech2 equivalent)

- Provided full-service repairs, pre-delivery inspections in addition to specialized child seat fitting services, sales, delivery, stock management and warehouse operations.

Thames Water   May 2015 - Sept 2016
Wastewater Engineering Operative

- Diagnosed, maintained and repaired wastewater infrastructure across residential and commercial sites.
- Operated specialized equipment for high-pressure jetting, obstacle clearance, tankering and emergency response to flooding and pollution.

Education

Le Wagon Full Stack Web Development Bootcamp
London | January - March 2022
360-hour intensive training program covering Ruby on Rails, JavaScript, SQL, Git, and modern web development practices. Built multiple full-stack applications using test-driven development and agile methodologies.

London Art College — Diploma in Graphic Design
Pass with Distinction | 2005-2007
Colour theory, perspective, composition, digital and traditional design techniques.

Prince's Trust Team Programme
2011
Leadership development, team collaboration, project management.

Personal Experience & Hobbies

3D Printing & Physical Design
Design and creation of functional mechanical prototypes, combining CAD design with hands-on engineering and fabrication.

Experimental Web Technologies
Personal proof-of-concepts exploring WebAssembly and advanced shader techniques, several of which led to production implementations in a professional environment.

Game Development & Graphics Programming
Building and tinkering with game development and design concepts and real-time graphics programming from a young age

Arts & Crafts
I leverage my technical knowledge and hands-on skills to design and produce printed t-shirts, posters, mugs and other items using my own resources and equipment.

Work Style & Preferences

Remote/Flexible Working
Parent and carer responsibilities requiring flexible arrangements.

Collaborative Problem-Solver
Strong communication across technical and non-technical audiences.

Self-Directed Learner
Transitioned from operations into engineering via bootcamp while employed full-time. Continuous self-development outside of day to day work.

Research-Driven Development
Comfortable with ambiguity, prototyping, and experimental or iterative refinement.