



OWEN WILLIAMS

MACHINE LEARNING / SOFTWARE ENGINEER

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 [GitHub](https://github.com/owennewo/) (https://github.com/owennewo/)

 [YouTube](https://www.youtube.com/OwenWilliamsRobotics) (https://www.youtube.com/OwenWilliamsRobotics)

Software Engineer with 25+ years building scalable systems, now specialising in Machine Learning and AI. Led teams delivering production ML models for NHS healthcare and insurance, whilst architecting cloud infrastructure on Azure, GCP, and AWS. Combines deep software engineering foundations with modern ML expertise to ship AI products that solve real-world problems.

WORK EXPERIENCE



Lead Machine Learning Engineer at DrDoctor (<https://www.drdoctor.co.uk/>)

2022-02 - 2025-05

Led the AI team developing large ML models and data products to improve NHS clinic efficiency across 50 NHS Trusts

- DNA model to predict patient no-shows and late cancels used by 10 NHS trusts
- Visualisation and algorithms to support overbooking, linked appointments and workflows
- LLM solutions over patient communications to automate high volume hospital tasks
- Full-stack ML - infrastructure, feature engineering, model training/monitoring, and serving in Azure
- Agentic LLM prototypes (including RT Voice) using OpenAI, Google and LangSmith Agent SDK



Senior Software / Machine Learning Engineer at Admiral Insurance (<https://www.admiral.co.uk/>)

2018 - 2022

Initially worked in R&D exploring new product opportunities, then moved to Advanced Analytics to help move core models to Google Cloud Platform

- Developed and deployed ML solutions and researched technologies across various Admiral business areas including claims, fraud detection, and pricing
- Migrated critical data pipelines and ML models from in-house systems to GCP/Vertex AI
- Prototypes with AWS Connect including Lex (conversational AI) and Polly (text-to-speech)
- Security champion for ML products on Google Cloud Platform

EDUCATION

Southampton University
(<https://institution.com/>)
Degrees

- Electromechanical Engineering MEng
- Distinction / 1st

Graduation Date: 1996

SKILLS

LANG: Python, C#,
Typescript, C/C++

Advanced

AI: Azure AI Foundry,
Google VertexAI, OpenAI

Advanced

CLOUD: Azure, GCP, AWS,
Docker, Kubernetes,
DevOps, Terraform

Proficient

DATA: PySpark, SQL,
Pandas, NumPy, Viz

Proficient

WEB: React, Vue, REST,
GraphQL

Comfortable

LANGUAGES

English

Native speaker

Welsh

Fluent



Developer / Architect at **Ubiquity, Avaya, CafeX** (<https://www.avaya.com/>)

2005 - 2018

Startup telecoms specialising in SIP and WebRTC. Bought by Avaya for \$140M in 2007 and subsequently spun off to focus on WebRTC

- Developer and architect on core application server for a telephony tech startup
- Led integrations with Microsoft, Avaya, and Cisco products
- Major role in migrating products to AWS and Azure (Kubernetes, Istio) including DevOps practices



Developer at **AKQA** (<https://www.akqa.co.uk/>)

2000 - 2005

Delivered creative and technical solutions for major brands including Nike, Microsoft, Orange, Dominos, and Smithsonian Institute

- Worked in small, agile teams to develop cutting-edge web applications under challenging circumstances
- Delivered Orange Mobile's first ecommerce site (Java)
- Delivered Dominos online store in 2 months (C#)



Software Engineer at **Logica (CGI)** (<https://www.cgi.com>)

1996 - 2000

Fulfilled various development and team-lead roles across projects for BBC, Glaxo, and BT

INTERESTS

Robotics/electronics



I have a passion for building robots and electronics projects, particularly those that involve machine learning and AI. I enjoy working with microcontrollers and developing custom hardware solutions.

Guitar



Particularly playing fingerstyle blues and folk. Also have a few technical projects related to learning and notation

Cycling



I try to cycle daily. Mountain biking, gravel, road, I love it!

PROJECTS

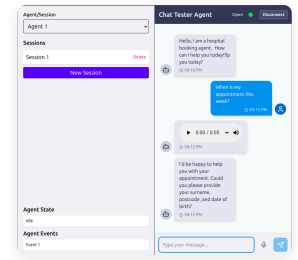
RealTime Voice - using Agentic LLMs for patient Comms

Prototyped inbound patient phone requests being served by agentic models to answer or direct patient queries

Azure Communications Service - for inbound calls

Compared capabilities of Google ADK, OpenAI Agent SDK and LangSmith

Provided tools to LLMs to provide access to patient context and to expose actions

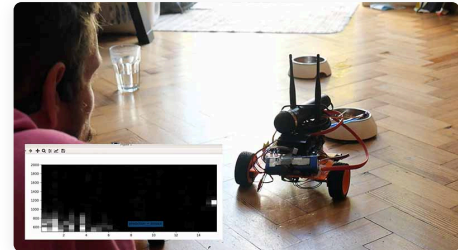


NVidia AI Project: Sheepdog Whistle Neural Network (<https://www.youtube.com/watch?v=YnogVYTpyWo>)

Controlling a robot the same way as a sheepdog, through whistling!

Custom-built JetBot powered by Jetson Nano and a Storm32 motor controller control board

PyTorch neural net is trained with the sounds of different whistles or click sounds represented spectrographically as images



Teddington Robotics - Go! (Dual VESC Balancebot Chair) (https://www.youtube.com/watch?v=O1B_3NOeJz0)

Built a self-balancing chair for my daughter's favourite teddy bear. The control board is a dual VESC (often used in skateboards) but firmware is entirely my own. Balancing something this big and heavy is tricky!

