

Tony Willis

Contact

• Upminster, London
• On request
• On request
• www.bonesforge.co.uk

Key Skills

Cloud & Automation

Azure Core Services (VMs, VNets, Storage)

PowerShell (in progress), IaC concepts

Git/GitHub, Linux fundamentals

Engineering & Prototyping

CNC machining (HAAS, Sodick, XYZ)

G-code (handwritten & CAM)

SolidWorks + CAMWorks

Reverse engineering & 3D modelling

Core Strengths

Systems troubleshooting

Process optimisation

Technical mentoring

Safety leadership

Cloud & Technical Projects

Built small Azure lab environments using VMs, VNets, and Storage for hands-on learning

Created personal web projects (Bones Forge) using HTML/CSS/JS with audio/visual features

Developing PowerShell scripts for automation as part of AZ-104 preparation

Azure • PowerShell • Git/GitHub • Visual Studio • CNC Automation • HAAS • Sodick • SolidWorks • CAMWorks

Professional Summary

Technically driven engineer transitioning into Azure Cloud Infrastructure after 20+ years in high precision mechanical engineering and CNC automation. AZ-900 certified with AZ-104 and AZ-305 in progress. Brings deep experience diagnosing complex automated systems, optimising processes, reverse engineering and mentoring technical users. Now applying a builder's mindset to cloud deployments, scripting, automation, and infrastructure reliability.

Personal Profile

Experienced mechanical engineer with a strong background in precision manufacturing, systems troubleshooting, and technical mentorship across leading UK universities. Skilled in CNC machining, reverse engineering, and translating complex requirements into reliable, high-quality outputs. Expanding into cloud infrastructure with growing experience in Azure services, PowerShell, Git/GitHub, and foundational scripting in Python and JavaScript. Focused on combining hands on engineering discipline with modern cloud platforms, automation, and creative problem-solving.

Recent Role

Senior Research Workshop Technician

Imperial College London | Feb 2013 – Present

- Manufactured complex research components: turbine test rigs, material samples, bespoke medical devices (e.g. cranial implants for Eden 2020).

- Operated and maintained a full suite of CNC equipment: HAAS TL1/TM2/VF2/ST20Y, Sodick AQ400L/VL400Q, XYZ mills and lathes.

- Wrote and debugged G-code programs, both longhand and via CAM, optimizing toolpaths and validating safety.

Education & Certifications

- Azure Foundations (AZ-900) Certification.
- HNC in Mechanical Engineering
- NVQ in Mechanical Engineering
- A Level Physics
- 7 GCSEs (Grades B–C)

Current Learning

- AZ-104 Azure Administrator Associate – currently studying
- AZ-305 Azure Infrastructure Solutions – currently studying
- PowerShell for Systems Automation
- Custom Web Dev Projects – Bones Forge branding, audio toggles, retro aesthetics

- Designed components in SolidWorks with CAMWorks integration.
- Mentored students and staff on CNC and lab tools, from basic lathes to micro hardness testers.
- Maintained iconic institutional projects: college mascot vehicle and original tower clock.
- Champion of cross-functional collaboration—translating research needs into precise manufacturing outcomes.

Earlier Experience

Engineer/Technician

School of Engineering & Materials Science, QMUL | 2003 – 2013

- Supported student design and prototyping, maintained mechanical labs and equipment, led safe usage of measurement tools.
- Fabricated components using manual and CNC machinery; installed and managed lab equipment across biology and engineering departments.
- Delivered demonstrations to student groups and visiting cohorts.
- Tracked equipment ordering, lab inventory, and safety compliance across sites.

Machine Operator

Getty Images, London | 1999 – 2003

- Ran automated framing systems, logged performance metrics, managed maintenance cycles, and ordered critical spares.
- Supported digital imaging via drum scanning workflows.

Additional Details

- Full UK Driving Licence (Car & Motorcycle)
- Passion for craftsmanship, re-enactment builds, AI ethics and motorcycling
- Creator of Bones Forge: a developing personal brand blending fabrication, creativity, code, and cloud

References - Available on request.

