Curriculum Vitae

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Nationality:	British and German
Languages:	Native English, fluent written and spoken German

Profile

I'm an experienced software engineer, adept as both a facilitator and individual contributor having worked as manager and engineer in med-tech, the aeronautical industry, digital publishing and games. My strong technical knowledge encompasses many platforms and sectors. I enjoy a challenge, am open to change and am a continuous learner; an active listener who helps others articulate their thoughts, has an analytical mindset and am structured in resolving issues. I enable teams to bring their best work, mentoring those more junior than myself, and look to help team members bond.

Qualifications

Spiced Academy:	November 2023-February 2024: Data Science Bootcamp
Subjects:	NumPy, Pandas, Relational Databases + SQL, Machine Learning with Scikit-learn, Supervised Learning: Classification + Regression, Non-linear models, Forecasting time series, Deep Learning with TensorFlow, Convolutional Neural Networks.
Terra.do:	August 2023-November 2023: Climate Change Bootcamp
Subjects:	Foundational climate knowledge concepts, analytical skills for climate action, systems thinking in geological, ecological, economic, and political dynamics across multiple scales, climate justice, collaboration, empathic engagement and communication.
Coventry University:	1988–1992: BSc. Hons Computer Science 2i.
Subjects:	Analytical Techniques, Statistics and Simulation, Computer-Architecture, Software Engineering, Computer Graphics, Databases, Real-Time and Embedded Computer Systems, Project Management.
Degree Dissertation :	"The Interactive Manipulation of Bezier Curves and Surfaces"

Skills Summary

Machine Learning

- Data Science with C++, Python, Pandas, NumPy and scikit-learn.

- GeoSpatial with rasterio, xdarray and GeoPandas.

- Data Visualisation using Vega-Lite, Plotly, Seaborn and Matplotlib.

- Programming in C++, Python, C#, Swift, PostgreSQL, Bash with Git, AWS and Docker.

- Linear Algebra, Analysis and Descriptive Statistics.

Programming and App Development

- Feature lead for health tracking, a major iOS vertical, utilising Swift and UIKit/SwiftUI.

- Responsible for the UML based software design for the Nintendo DS project Grundschule (released Jan. 2009), the complete C++ based development and its testing and quality assurance.

- Design and development work in C++ and C# to visualise 3D CAD models for the Aeronautical and Automobile industries.

- Design and development of Virtual Reality Software for, amongst other things, Virtual City visualisation using OpenGL on SGI Infinite Reality basis and OpenGL/DirectX based on Win32.

- Production of platform independent C++ code developed with MS Visual C++ using the Python script language for system configuration.

- Design and development of ESARAD, a UNIX (Sun/HP workstations) based thermal radiative analysis tool for the European Space Agency.

Leadership

- Introduction of 'mobile first' strategy, including native mobile software development in a two-sided marketplace, stakeholder management, strategic guidance and oversight in the areas of analytics and Business Intelligence.

- Shaped the software process at an agency growing their digital business.

- Management, recruitment, technical conception, estimation and quality assurance for multiple Nintendo DS and iOS projects in cross-functional teams.

- Managerial and design responsibility for the Multimedia Playout Center project; a CORBA and Java Enterprise Beans based platform for interactive services in digital television (DVB) that were optimised using viewer profiling.

Experience

March 2016 to August 2023: Senior Staff Software Engineer / Sharecare Inc.

- Introduction of Vega-Lite for data visualisation of tracker data.

- A 80% reduction in start time applying concurrency techniques.

- Successive improvements to the concurrency model for clarity and performance.

- Mentoring of junior and mid-level developers across all teams.

- Application of Domain Driven Design to the refinement of the tracking domain.

» Motivation for change: A long time interest in combating climate change led me to take severance when offered which allows me to pivot into climate tech.

May 2015 to October 2015: Product Lead Mobile / Helpling GmbH

- Release of an Android App to assist the daily work of cleaners. The tool initially addressed the areas of job and offer management, notifications, navigation and schedule optimisation.

- Strategic enhancement of the companies Analytics and Business Intelligence infrastructure to allow for the comparison of performance between web and app performance.

- Structured the Google Analytics reporting for mobile to all stakeholders.

- Established the infrastructure for native software development, including automated (both acceptance and unit testing) and continuous integration.

» Motivation for change: A shift in investor emphasis from growth to profitability led Helpling GmbH to halt operation in four countries, making over 80 employees redundant including all those still in their 6 month probationary period.

September 2010 to April 2015: Lead Developer / C3 Creative Code and Content

- Brought on board in the early stages of to grow their digital business. I participated in shaping the software process.

- Froschkönig (The Frog King) was awarded iPad Book-App of the Year by Apple in 2012.

- Introduced agile development to employees as part of a company wide talk on software development.

- Coached predominantly editorial designers in the production of digital assets for iOS.

- Performed reviews and established technologies for: Cross-platform development using Xamarin, and Continuous Integration using Bamboo.

» Motivation for change: Aiming for a managerial role with functional and disciplinary responsibility, a shift in mobile development strategy, away from native platforms, led me to look elsewhere for my next career move.

March 2010 to August 2010: IT Software Developer / PACE Aerospace Engineering and Information Technology GmbH

- C# development for an ‚Aircraft Performance' Project. The project replaced the tedious calculation by hand of flight plans for an older aircraft used by the French Air Force.

» Motivation for change: This was a project based contract at a previous employer (see below).

August 2005 to March 2010: Freelance Development Director / syncRage GmbH (Secondary employment prior to September 2008)

- Development of a cut scene editor and player for TGE from GarageGames.

- Establishment of the companies agile software process, combining creative and development tasks. Coordination of external game designers and digital artists.

- Negotiating with publishers from the games industry.

- Handling submissions to Nintendo/Apple and liaising with them on issues pertaining to software reviews.

» Motivation for change: The company failed during the development of Sponge Bob Jellyfish Jam.

August 2001 to May 2008: IT Project Manager / PACE Aerospace Engineering and Information Technology GmbH

- Introduction of unit testing to the software process.

- Integration of the geometric modeller Open CASCADE with Open Inventor, and enhancements in OpenGL, as a framework that was expanded over the years to support many customer projects and the flagship product Engineering Workbench.

» Motivation for change: The pursuit of a long standing wish to work in the games industry led me to progressively reduce my hours, and then change completely.

December 1997 to August 2001: Software Architect / artemedia AG

- Implementation of algorithms for Imposters, Occlusion-Culling, automatic Level of Detail and Dynamic Lighting.

- Multi threading architecture for multi screen based VR projections.

» Motivation for change: Interest in progressing my career led to finding a new role as team leader.

March 1995 to August 1997: Software Developer / European Gas Turbines

- A SET-ATS implementation for the exchange of product data.

- Research and presentation of STEP for the next generation of product data exchange.

- ESARAD software training for scientists at the German aeronautics and space institute DLR (Deutsches Zentrum für Luft und Raumfahrt) in Adlershof, Berlin.

» Motivation for change: Moved to Germany for personal reasons.

September 1992 to March 1995: System Manager / British Horse Society

- Assembly and supervision of a network with more than 100 PCs and a Novell v3.1 Server, 30 terminals and a SCO UNIX System.

- Automation of software updates across the network.

» Motivation for change: The wish to take on a development role.