

PROFESSIONAL STATEMENT

A highly motivated individual with technical and analytical background, gained through completing two postgraduate level degrees in Structural and Subsea engineering, which was further enhanced while working at Zentech as a consultant engineer and later as a software developer. A fast learner; demonstrating the motivation required to meet project deadlines whilst maintaining high standards of technical work.

PERSONAL PROFILE

Availability:	A month notice.
Geographical Availability:	Willing to relocate nationally and internationally.
Driving License:	Full and clean UK Driving License.

EMPLOYMENT HISTORY

July 2015 - Present Software Developer, Zentech International Ltd, Pencoed, South Wales

Main duties in addition to the previous role:

Zencrack GUI development in Python

- Conversion of a text-based interface to graphical user interface using wxPython.
- Improving and modifying program aesthetics.
- Updating the existing data analysis library.
- Introduction of a new colour-coded error/warning management system.
- Debugging.

Research and development

- Gmesh: Researched into the possibility of using Gmesh for autonomous rings creation within the Zencrack software, resulting in the simplification of the crack definition procedures.
- Visualization Toolkit (VTK) for Python: Researched into the implementation of VTK python to the Zencrack software, leading to significantly faster import times, better visuals and the introduction of a comprehensive node/edge/element selection, shading and colouring tool.
- Python 3: Researched into Python 2/3 compatibility issues, transitioning from Python 2 to 3 and possible porting solutions.

Secondary duties:

- Website maintenance in JavaScript, html and CSS.
- Workstations assembly, maintenance and optimisation to achieve the perfect balance between price and performance.
- CAE and miscellaneous software packages installation.
- Remote desktop, Installing network hardware such as printers, switches and hubs.

May 2014 - June 2015 Senior Consultant Engineer, Zentech International Ltd, Pencoed, South Wales

Main duties:

Post-processing and pre-processing

- Producing detailed models and simulations of 3D crack growth using Zencrack and Abaqus software.
- Linear and non-linear finite element analysis of structural models using Abaqus and Ansys Workbench.
- Crack formation and propagation analysis using Zencrack Software.
- Forensic and fracture mechanics studies for structural model failures.
- Creating 3D structural models using Abaqus and Ansys Workbench.
- Deconstruction and re-meshing of the models to create crack propagation paths.
- Writing subroutine files in FORTRAN to be used with Zencrack software.
- Creating Abaqus scripts in Python to automate numerous Abaqus tasks.
- Creating high quality crack propagation animations using Python scripts, Abaqus and Camtasia in various formats.
- Analysing and manipulating Abaqus, Ansys and NX Nastran input files in accordance with the Zencrack software requirements using data analysing software Examdiff pro.

Secondary duties:

- Creating new examples and tutorial models for training purposes.
- Producing engineering reports, presentations, professional Zencrack documentations and manuals using Microsoft office, Gimp and Irfanview.

Oct 2012 - April 2014

Planning advisor, Self-employed, Leicester

Main duties

- Quality assessment and control.
- Producing bill of quantities.
- Preliminary site surveys.
- Site preparation and site execution.
- Health and Safety Regulations.

Aug 2007 - Sep 2011

Site Engineer, K.N.T limited, Part time, Leicester

Main duties:

- Producing bill of quantities.
- Preparation of structural drawing and design using AutoCAD.
- Preliminary site surveys.
- Carrying out timber rafter and joists calculations.
- Timber staircase design in accordance to local council rules and regulations.
- Health and Safety Regulations
- Planning submission and Building Regulations
- Material stock management.
- Organising and attending kick-off meetings with clients and local councils.

ACADEMIC HISTORY

Masters of Science in Subsea Engineering, University of Aberdeen.

2011 - 2012

Post Grad Diploma in Structural Engineering (PT), City University London.

2007 - 2009

Bachelor of Engineering in Civil Engineering, City University London.

2004 - 2007

SKILLS

General

- Teamwork - Essential for completion of numerous key projects throughout my professional and academic career which required collaborative working with other engineers.
- Business awareness - Integral to working as a planning advisor in a self-employed capacity. An understanding of current events and changes in industry is necessary for the successful delivery of client projects.
- Tenacity - Vital to facilitating change from the construction industry, where alongside working as a full-time consultant engineer in a relatively foreign field, several programming languages were learnt in a self-taught capacity.

Linguistic

- English – Fluent.
- Persian – Fluent.
- German – Novice.
- Spanish – Novice.

Computing

Programming/Script

- FORTRAN – Intermediate proficiency.
- PYTHON 2.7 – Advanced proficiency.
- HTML – Intermediate proficiency.
- JAVASCRIPT – Intermediate proficiency.
- Visualisation Toolkit VTK – Intermediate proficiency.
- MathCAD – Intermediate proficiency.

Software

- AutoCAD 2D & 3D – Advanced proficiency.
- SolidWorks – Intermediate proficiency.
- ANSYS WorkBench – Intermediate proficiency.
- ABAQUS – Advanced proficiency.
- PIPESIM – Advanced proficiency.
- NX NASTRAN – Intermediate proficiency.
- MS Office – Advanced proficiency.
- CAMTASIA – Advanced proficiency.
- ExamDiff pro – Advanced proficiency.
- ZENCRACK – Advanced proficiency.
- GMSH – Advanced proficiency.

Hardware

- Hardware specialist - Advanced proficiency. Able to build a desktop computer from scratch, run diagnostics and optimise hardware to improve performance.

REFERENCES

Name: Ramesh Chandwani
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Name: Chris Timbrell
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