

Francesca Young

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Education and Qualifications

MSc Bioinformatics, Polyomics and Systems Biology. August 2015 – present
Foundations in Bioinformatics (B2), Omics and Systems Approaches in Biology (A5) Protein Informatics and Drug Discovery (A3), Metagenomics (B2), Omics Data Handling, RNA-Seq and Next Generation Transcriptomics, Systems Biology approaches to Omics Data Analysis, Parasite Polyomics. Programming (Java) (A2, 50% complete), Database Theory and Application (A5, 30% complete).

MSc. Information Technology Systems University of Strathclyde 1987-1988
40% Computer Science, 40% Electronics, 20% Business Applications

BSc. Biophysics 2(i) University of Leeds 1983-1987
Tavistock School, Devon. A levels - Mathematics, Physics, Chemistry, 8 O levels.

Research Experience

University of Glasgow **Research Assistant** 1989-1991
This was a two year post as part of the TOPFIT project, a European collaboration in Molecular Electronics, with Prof.J.R.Barker and Dr Jon Cooper.

I developed pattern recognition software for the interpretation images collected from scanning tunneling microscope (STM) and atomic force microscope (AFM) experiments. I designed and conducted experiments to investigate the patterning of biomolecules onto substrates. This included fluorescence microscopy, STM, AFM techniques. Making flat gold and graphite surfaces, and using cleanroom techniques to etch patterns onto the substrate.

I was also responsible for advising and supporting staff and students in the use of both STM and AFM, becoming the resident expert and keeping abreast of current developments in this field.

University of Glasgow **Research Assistant** 1993-1995
This was a two year post in the protein crystallography group funded by IBM, with Prof Neil Isaacs. I was responsible for porting CCP4, a collaborative computational project that integrated programs developed independently by protein crystallography laboratories throughout Europe onto the IBM (CMS) mainframe platform. I worked in close collaboration with other developers in UK and Europe to standardise the CCP4 package. This enabled it to be platform independent and made it easier for new programs to be integrated.

University of Strathclyde **MSc Project**
Developed a scheduling system for a flexible manufacturing systems at Weir Engineering. This enabled them to remove bottle necks in production thereby reducing their costs.

University of Leeds **BSc project**
Built a model of newly determined protein structure and used this to analyse the structure and function of the protein

Publication: Cooper, J.M., Shen, J., **Young, F.M.**, Connolly, P., Barker, J.R., and Moores, G. (1994). The imaging of streptavidin and avidin using scanning tunneling microscopy. J. Mater. Sci. Mater. Electron. 5, 106–110.

Skills

Computer skills

- Languages: Java, Python, C, R, FORTRAN, shell script including use awk and grep.
- Database: Developed MySQL DB for drug screening. Developed a NoSQL DB to integrated omics data
- Platforms: HPC, Cloud computing (EC2), Orion Cluster (8 Unix servers (centos)).

Organizational Skills

- I have to become an organised project manager, prioritizing time between a diverse range of competing projects with minimal support or supervision. These skills have been developed both within the research environment and while running my own business.

Communication skills

- I gained a reputation as an enthusiastic and active team member on international committees and working groups for collaboration for the development of a major research software suite.
- I completed a Vocational Qualification in Training and Development achieving a high level of presentation and training skills.
- I have excellent communication and team working skills developed through my experience in a wide variety of roles in work and in a voluntary capacity.

Career History (Outwith Research)

Urban Sanctuary Gardens

Business Owner

2007- 2014

Garden Design and soft landscaping business.

- Set up successful and flexible business that fitted into around life style.
- Satisfied clients meeting agreed budgets and deadlines.
- Negotiated with clients and subcontractors.
- Learnt business and design skills necessary to succeed.

Career Break

1997 - 2007

During this time I focused on my three children and being a proactive member of my community.

- Chair of Playgroup, running a voluntary management committee. Included interviewing and employing two new play leaders, dealing with the Care Commission and Fire Service. Negotiating for new premises.
- Member of SPIG, leading projects to make improvements to the local school playground.
- Woodcraft youth leader and organizer.
- Member of School council
- Completed Business Start Up and Bookkeeping courses. Pacific Institute STEPS personal development course.

Management Introductions

1996-1997

Trainee within training company providing action training for graduates and managers.

- Conducted training needs analysis on clients.
- Designed, delivered and evaluated training events.
- Gained SVQ level 3 including assessor units D32 and D33.

Self Employed

1992

- Negotiated and completed a project to design, write and install software to save time and improve accuracy in complex calculations related to oil fields.
- Adapted research software to run on new platform over University network.
- Provided training materials and supporting documentation.