SARAH HEWITT

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PERSONAL STATEMENT

I am enthusiastic and ambitious with a PhD in statistics, and a strong background in analytical chemistry. I am both academically and creatively motivated and possess excellent interpersonal skills with the ability to work as part of a successful team. I am equally able to work individually on my own initiative. My recent past experience demonstrates my ability to manage a significant personal research project, meeting targets and adhering to strict deadlines. I have a natural ability to prioritise work and manage time efficiently in order to achieve goals. I am highly skilled at presenting work in difficult subject matters as either a report or as an oral presentation in a manner appropriate to the audience. I am also adept at discussing ideas and open to opinions and advice. I have presented my research at high profile international conferences. My most recent employment is at one of the world's largest technology companies (IBM), where I have gained experience working within a global team. I thrive on pressured working environments, where I am constantly learning and expanding my knowledge. I am now seeking new challenges in an industry that I am passionate about, with a desire to make the best use of my skills and experiences whilst enabling both professional and personal development

WORK EXPERIENCE

Sept. 2012-Present: **Software Developer, IBM, Hursley, UK**
At IBM I have been employed as an Information Developer and Quality Assurance tester working on the SPSS suite of statistical analysis products. My work involves collaborating with the software engineers in the UK, USA and China to fully understand new and existing features of the software. In my role as an Information Developer, I write clear and concise help documentation, installation instructions, and release notes for the software. I also help to plan when the documentation is written and completed in order to adhere to the release schedule. In my role as a QA tester, I write and execute test plans that cover all aspects of the software's functionality. I am also involved in several volunteer programs, such as teaching ICT to year 1 pupils at a local primary school, and leading the organization of Think.IT, an IBM event for female year 8 students that aims to encourage them to continue to study science, technology, and mathematics subjects. I am also part of a team that is redesigning IBM's internal volunteer and activity management web application, where I am working on the user interface design for the website.

March 2011-June 2012: **Postdoctoral Research Fellow in Statistics, Southampton Statistical Sciences Research Institute, University of Southampton, Southampton, UK**
My work involved high-level statistical research into the design and analysis of computer experiments, and the subsequent implementation of new methodology in research code. I collaborated with researchers from different disciplines at the University, Dstl and the Met Office. I presented the results of my research at international conferences. I also acted as a teaching assistant in undergraduate tutorials.

Oct. 2007-June 2009: **Postgraduate Demonstrator, School of Mathematics, University of Southampton, Southampton, UK.**
Duties included providing teaching assistance for undergraduate mathematics and statistics tutorials and grading undergraduate work. This work involved guiding students on their approach to homework problem sheets and instructing students on how to use S-Plus, R and Minitab statistical programs.

Sept. 2008–Dec. 2008: **Researcher in Statistics, Pfizer UK, Sandwich, Kent, UK.**
This was a CASE award placement with both the Non-clinical Statistics and Computational Chemistry groups. Aim of research was to derive empirical rules for structure-property relationships to be used in predicting how functional group changes within series will alter the melting point, solubility and the propensity to form polymorphs of organic compounds. The work involved searching for relevant compounds and gathering data from the Cambridge Structural Database.

June-Oct. 2006: **Researcher, eCrystals (http://ecrystals.chem.soton.ac.uk), University of Southampton, Southampton, UK.**
My work was focused on single crystal X-ray structure determination, and uploading of such data, including these results, to the eCrystals Crystal Structure Archive database.

Nov. 2003-Nov 2005: **Saturday Data Entry Operator, Federation of Holistic Therapists, Eastleigh, UK.**
Duties included uploading personal and confidential information from potential members of the federation to the company database, dealing with enquiries from members via phone calls, letters and emails, processing payments made by cheque and credit card and liaising with colleagues and superiors if and when problems occurred.

Aug. 2001-Apr. 2002: **Housekeeping Assistant, Winchester and Eastleigh Healthcare Trust, Mount Hospital, Eastleigh, UK.**
Duties included general housekeeping duties, serving refreshments to and interacting with the elderly residents. An awareness and appreciation of infection control, particularly for the containment of MRSA, was necessary.

EDUCATION

Ph.D.: University of Southampton, Southampton, UK, 2006-11.
Area of Research: Statistics, chemistry, chemometrics, regression analysis, design of experiments, optimal design, sequential design.
Thesis Title: "Optimal and Sequential Design for Bridge Regression with Application in Organic Chemistry".

B.Sc.: University of Southampton, Southampton, UK, 2003-06.
Degree: Chemistry with Mathematics.
Result: First class honours.

AS/A levels: Barton Peveril College, Eastleigh, Hampshire, UK, 2001-03.
Result: A grade in AS-level Geography; A grades in A-level Biology, Chemistry and Mathematics.

GCSEs: Wyvern Technology College, Fair Oak, Eastleigh, Hampshire, UK, 1996-2001.
Result: A* grades in Art, Double Science, English Language, Geography, German, Mathematics and Textiles Technology; A grades in English Literature and Statistics.

CONFERENCE PARTICIPATION

June 2012: Spring Research Conference (invited speaker), Harvard University, Cambridge, Massachusetts, USA. *Title of Talk:* Optimal and Sequential Design for Bridge Regression.

November 2011: Chemical and Biological Defense Science and Technology Conference, Las Vegas, Nevada, USA. *Title of Poster:* Calibration of Transport and Dispersion Models Using a Combination of Physical and Computer Model Data.

August 2011: Designed Experiments: Recent Advances in Methods and Applications, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK. *Title of Poster:* Optimal and Sequential Design for Bridge Regression.

November 2010: Design of Experiments Reading Group, Southampton Statistical Sciences Research Institute, University of Southampton, UK. *Title of Talk:* Optimal and Sequential Design for Bridge Regression.

October 2009: Design and Analysis of Experiments Conference, University of Missouri, Columbia, Missouri, USA. *Title of poster:* Optimal and Sequential Design for Bridge Regression.

August 2008: XXI Congress and General Assembly of the International Union of Crystallographers, Osaka, Japan. *Title of poster:* Application of Statistical Methods for the Understanding of Crystal Structures of Organic Solid Forms and Prediction of their Properties.

March 2008: 31st Research Students' Conference in Probability and Statistics, University of Nottingham, Nottingham, UK. *Title of talk:* Variable Selection and the Prediction of Properties of Pharmaceutical Solid Forms.

ADDITIONAL SKILLS

I.T. Proficiency:
Microsoft Office: Word, Excel, PowerPoint and Outlook.
Lotus: Notes and Symphony
S-Plus, R and Minitab statistical programs.
LaTeX document preparation system, including mathematical typesetting, preparation of scientific reports, posters and slides for presentations.
DITA XML authoring tool, including experience with diagnosing and fixing errors, and information architecture.

Other Skills:
Managing an individual, long term research project.
Time management and prioritisation.
Setting and achieving objectives.
Adhering to strict deadlines.
Attention to detail.
Library and internet based research skills.
Extracting important information from research.
Identifying problems and constructing innovative solutions.
Evaluating results for improvement.
Ability to work as part of a team and individually.
Thorough understanding of common statistical methodology.
Scientific and mathematical report writing.
Graphical presentation of statistical analysis.
Communicating complex ideas at a level appropriate to the target audience.