Andrew DeBardeleben Droll

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SUMMARY

Advanced skills at detail-oriented problem solving and analysis in a self-starting package make the the Analyst/Researcher that your company needs. With demonstrated independent and collaborative research experience in quantitative fields, advanced written and verbal communication skills, and demonstrated knowledge in IT, I will identify patterns that you have been missing and help you discover how to optimize these opportunities to develop your business.

Writing, research, and technical blogging samples are available at my website: http://andrewdroll.com

HIGHLIGHTS OF QUALIFICATION

○ Excellent written and verbal communication skills. Published author in peer-reviewed mathematics and physics research journals. Extensive experience presenting complicated ideas to groups in seminar talks and thesis defenses.
○ Demonstrated programming expertise – developed modeling simulations for high energy Higgs boson physics. Experience with Python, FORTRAN, C, C++, and Java.
○ Front-end web development expertise using HTML, CSS, Bootstrap, PHP, and JavaScript.
○ Extensive knowledge of LaTeX typesetting, as well as all common word processing and office software packages (Microsoft Word, OpenOffice, Google Docs, Word Perfect).
○ Excellent problem solving and analytical skills. Published cutting-edge research on some of mathematics' and physics' most contested problems, including:
    ○ Developed model-testing simulations for Higgs boson physics. Involved testing models against projected data profiles and developing confidence intervals for their validity.
    ○ Expanded the scope of application of Li's criterion for the Riemann hypothesis. Involved taking a problem-solving approach and showing that it could be applied to solve different, broader questions.
    ○ Classified all Ramanujan unitary Cayley graphs. Involved providing a complete description of all objects satisfying a given technical criterion via detailed analysis.
○ Strong interpersonal and teaching skills – ran tutorials for groups of 20-150 students, as well as extensive one-on-one and group tutoring experience in mathematics and physics.
○ Enthusiastic about collaborating to solve problems in team settings. Comfortable presenting new ideas and communicating openly with others about how to best approach problems.
○ Basic knowledge in French (10 years French immersion in grade school).

TECHNICAL SKILLS

Programming Languages	Python, FORTRAN, FORTRAN, C, C++, Java
Operating Systems	Windows, Linux
Web/Networking	HTML, CSS, JavaScript, PHP
Office Packages	Microsoft Office, OpenOffice, Google Docs
Specialized Software	LaTeX, Photoshop, R, Maple

RECENT EMPLOYMENT

Computer/Technical Consultant (2003-present).
Van Walraven Appraisals Inc., Ottawa, Ontario.
- Simplified and continually streamline data back-up systems (tracking over 30,000 client files), eliminating redundant labour.
- Research and manage computer and software acquisitions, coordinating with stake-holders to define end-user needs.
- Developed extensive practical problem-solving expertise through providing on-call technical hardware and software support.

Laboratory/drop-in centre physics T.A. (January – April 2013)
Carleton University, Ottawa, Ontario.
- Developed interpersonal and teaching skills supervising laboratory sessions and administering problem-solving tutorials for groups of 60-70 students.
- Developed teaching farther at the help-centre level, providing specialized assistance to groups and individuals.

Graduate Research Assistant (2007-2012)
Queen's University, Kingston, Ontario.
- Collaborated on successful research projects with other students and faculty.
- Demonstrated written communication and technical writing skills – published peer-reviewed research in graph theory and number theory, and completed successful master's and doctoral dissertations.
- Demonstrated verbal communication skills, giving many hour-long seminar talks on research in progress to experts in the relevant fields.
- Developed advanced LaTeX typesetting proficiency.

Graduate Teaching Assistant (2007-2012)
Queen's University, Kingston, Ontario.
- Demonstrated excellent communication and teaching skills, administering tutorials for groups of 40-150 students with positive evaluations.
- Took advantage of patience and listening skills to give specialized help to students in one-on-one and in help-centre settings.

NSERC USRA researcher (Summers of 2006 and 2007).
Carleton University, Ottawa, Ontario.
- Self-taught the FORTRAN programming language.
- Demonstrated organizational skills – published peer-reviewed physics research with only a 4-month start-to-finish project window.

EDUCATION

Ph.D.   Queen's University, Mathematics (number theory), 2012.
- Received $78,000 in academic awards throughout program.
- An additional $30,000 funding through T.A./R.A.-ships.

M.Sc.   Queen's University, Mathematics (number theory and graph theory), 2008.
- Fully funded by a national academic award (NSERC CGS M, $17,500).

B.Sc.   Carleton University, Mathematics and Physics (double honours), 2007.
- Graduated with Highest Honours.
- Received 10 undergraduate awards based on academic merit ($25,000).