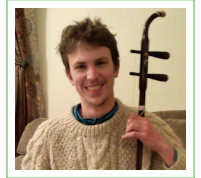


Sam Berney

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Education

2013 **B.A.**, *Oberlin College*, Oberlin, OH.
Major in Physics with Minor in Computer Science.

Programming Skills

Languages – Python (incl. tkinter, numpy), C/C++, C# , XAML, SQL, PHP 5, Mathematica, Scheme, \LaTeX .
Tinkering – lua, java, vimscript, html/css, apache, ssl, ssh, ftp.

I am familiar with circuits, microcontrollers, and assembly code. I have done coursework in Algorithms and the Theory of Computer Science.

Experience

2012–2013 **Astrophysics Research with Dr. Stinebring**, Oberlin, OH.

Developer, involved in the research of the NANOGrav collaboration, which aims to detect gravitational waves. I worked with Oberlin Professor Stinebring to model astrophysical phenomena that modify the signal of pulsars.

- Lead a small simulation development team.
- Worked with Australians, Canadians, Chinese, and Europeans affiliated with multiple international research organizations.
- Collected data using the world's largest radio telescope, Arecibo.
- Attended professional conferences and workshops in Sydney, Australia; and Austin, TX.
- Gained experience with Python and Mathematica.

2013 **Programming Intern**, *Dakota Legal Software*, Lafayette, CO.

- Massively reduced size of compiled code by streamlining exception handling.
- Worked successfully in an unstructured work environment.
- Gained experience with C#, XAML, C++, and Python.

2010–2011 **Private Computer Tutor**, *H. Gittler (deceased)*, Oberlin, OH.

- Helped a technologically savvy, nonagenarian man to solve problems.

2008, '09, '10 **Summer Assistant Teacher**, *South Dakota School of Mines and Technology*, Rapid City, SD.

- Successfully managed week-long workshop classes of novice programmers my age and younger multiple times.
- Built students' understanding of the fundamentals of programming; each student produced at least one animated cartoon or video game.

2010 **Cafeteria Clerk**, *Campus Dining Services*, Oberlin, OH.

- Prevented student food theft.

2009 **Head Cook**, *Harkness Co-operative*, Oberlin, OH.

- Headed a kitchen staff once a week to prepare meals for more than one hundred students.

2009 **Cleanliness Coordinator**, *Harkness Co-operative*, Oberlin, OH.

- Oversaw the co-operative cleaning of a dormitory floor.

2007–2008 **Private Violin Tutor**, Rapid City, SD.

2006–2009 **Violinist**, *Black Hills Symphony Orchestra*, Rapid City, SD.

2007 **Instructor and Guest Artist**, *The Burgoyne Institute of Music*, Soda Springs, ID.

- Lead a class of grade school students who successfully performed for the final concert at the Institute.

Small Contracts and Odd Jobs.

- Performed in string quartets at various functions including weddings and receptions.
- Diagnosed and repaired computer problems.

Languages

English – Mother Tongue	
French – Working Proficiency	2004–2009, 2010–2011
Arabic – Basic Proficiency	2009–2010
Spanish – Basic Proficiency	2004, 2006–2007
German – Basic Proficiency	2008–2009

Interest in Chinese, Japanese, and Quenya.

Leadership

I have demonstrated leadership abilities with depth and breadth of commitment: in addition to leading work on an astrophysics project and holding positions as Head Cook, Cleanliness Coordinator, Tutor and Instructor, I

- Acted as concert master, pit orchestra member, sectional leader, soloist, and quartet member;
- Attended every weekly Suzuki music school activity for more than ten years, never missing an event;
- Attended many summer music camps that required intense commitment;
- Played in selective (competitive) orchestras.

Cross-Cultural Experiences

- Hosted exchange student Luka from Montenegro for the 2007-2008 year.
- Worked with Canadian, European, Australian, and Chinese researchers.
- Traveled to Canada, England, Australia, Puerto Rico, France, Monaco, Italy, Montenegro.

Interests and Activities

Learning is how I approach the world.

- Games – Dominion, StarCraft II, etc. – and simulating or analyzing them.
- Running, Biking, Hiking, Yoga. Guitar, Piano, Violin.
- Tea Appreciation, Food Appreciation, Cooking, Healthy Living.
- Travel, Networking. Literature, Foreign Films.
- Languages; the New and Unfamiliar.

Contact and References

References available on request. Please contact me with any questions or comments regarding this resumé, job opportunities, or just to chat at sam@samuelberney.com or +1 (605) 415-2841.

Keywords

AAS, American Astronomical Society, Arduino, C++, C, CS, CSCI, EPTA, E&M, Igor Pro, IPTA, ISM, KiCad, LabVIEW, LaTeX, Logger Pro, Maple, Mathematica, North American Nanohertz Observatory, ODEs, OOP, Oracle SQL, PDEs, PPTA, Racket, abstract, analog circuit, astronomy, bash, calculus, cosmology, data collection, data, database design, developer, digital circuit, engineering, error analysis, foreign languages, functional programming, history, interstellar medium, liberal arts, linux, literature, managerial accounting, mechanics, microcontroller, model, modelling, music, neuroscience, numerical simulation, object oriented, observation, physics, probability, programmer, programming abstractions, programming, pulsar timing, quantum mechanics, sage, science, scientific method, scientist, scipy, server administration, statistics, technical writing, theories of computation, uncertainty analysis, unix.