

John Saponara

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Longtime back-end developer with front-end skills, strong in math and science, diverse experience.

Education

- 1994 Cornell University, Ithaca NY
 - PhD in Ecology & Evolutionary Biology
 - Spatially explicit simulation of the epidemiology of a plant virus transmitted by insects
- 1985 University of California, Berkeley
 - MS in Energy & Resources
- 1983 La Salle University, Philadelphia PA
 - BA in Physics

Experience

- Senior Software Developer, Mar 2018 - now
 - One-year contract at Bloomberg LP in Princeton NJ through Precision Global Consulting.
 - Rewrote legacy credit card ETL pipeline, leveraging python's dynamic nature for high configurability in a secure environment.
 - Generating services and database procedures from API schema to support front-end screens.
 - Python, SQL, C++, git, xml, jira, PostgreSQL.
- Senior Software Developer, Aug 2017 - Dec 2017
 - Contract at AT&T Labs in Bedminster NJ through Insight Global.
 - Extend a research NER pipeline for anonymization of sensitive customer data via NLP/machine learning algorithms (CRF, LSTM).
 - Provide a series of visual tools to improve labelling accuracy; serve as local expert on Linux, C++, and Python while suggesting many improvements to the system.
 - Maintain a production NER pipeline in C++. Project exceeded all goals.
 - Python, C++, git
- Senior Software Developer, Mar-Jun 2017
 - Contract for Vencore Labs in Red Bank NJ through Tekmark Global Solutions.
 - Map and monitor the US electric grid in realtime using twitter and other data feeds.
 - Refactor and greatly extend a proof-of-concept web gui and ReSTful API.
 - Leaflet, JQuery, Javascript, Flask, Eve, Eve-Swagger, Mongo, Python, Git, GeoJSON
- Consultant, Sep 2015 - Feb 2017
 - Sole creator of OpenTaxForms.org; open source code on github (user [jsaponara](https://github.com/jsaponara))
 - Creating a web interface and ReSTful API to tax forms, computed from the PDF forms at IRS.gov.
 - Python, Flask, Flask-Restless, SQLAlchemy, Javascript, Casperjs
- Senior Software Architect, Mar-Sep 2015
 - NovoPath, Inc., Princeton NJ
 - Rearchitect entire line of software for mobile platforms with open source technologies. Parsed codebase to automate generation of mobile interfaces. Project was cancelled.
 - Python, Flask, FlaskRESTful, SQLAlchemy, Javascript, Angular, Monaca
- Consultant, 2010 - Feb 2015
 - Created fully functional web application proof-of-concept that allows engineers to design and visualize foldable surfaces (using Three.js; see foldstar.com) for FoldStar Inc.
 - Literature review in tropical tree pathology for a foundation aiming to slow the rate of carbon-emitting investment in wood pulp and paper plantations.

- Senior Programming Engineer, 2007-2009
 - FoldStar Inc., Ringoes NJ
 - Translated topological algorithms to C++ under a NASA grant for "deployable space structures"
 - Python, VisualC++, VBA
- Senior Software Architect, 2004-2007
 - NovoPath, Inc., Princeton NJ
 - Designed and implemented highly customizable HL7 (medical b2b) API.
 - Communication interface and HCFA-1500-based billing software.
 - Managed developers in Visual Basic and Python on windows platform.
- Programmer, 2002-2004
 - Genuone Inc in Princeton NJ (now OpSec in Boston)
 - Suggest an approach that replaced a months-long planned project with a few days of coding.
 - Automate extraction of product prices from web pages (in Perl, Python, and Java).
 - Scrape data from the internet and served it to company intranet (in Java).
 - Write an exchange rate server in Java for local XML-RPC services suite.
- Consultant, 2001-2002
 - Stock trading simulation for securities litigators; web crawler for book publisher.
 - Real-time calling card server in C++ using CORBA and Oracle for Telcordia Technologies.
 - Adapt software to compute bird territory size for the Research Foundation of SUNY.
- Director of Software Development, 1995-2000
 - Transport Dynamics, Inc. in Princeton
 - Work with optimization experts to develop suite of real-time decision support software products for trucking companies. Manage and mentor programmers, select tools and built software development environment. Write GUI, design and implement several of the products and supporting utility, database, and network libraries all in C++ on Unix.
 - C++ compilers from KAI, IBM, and Cygnus; Purify; AIX, Solaris, Linux
- Adjunct Professor, 1995
 - The College of New Jersey (then Trenton State College), Ewing NJ
 - Teach "Principles of Biology" and received a highly favorable evaluation from the department chair praising my effective use of small groups and fearless integration of math into the course.
- Research Associate, 1992-1995
 - Dept. of Ecology and Evolutionary Biology, Princeton University
 - Maintain a simulation model of tree growth in response to light used to study forest succession in the Northeast US. Manage the input and output of many thousands of stochastic model runs to explore the model parameter space. Write a statistics application to process model output and automated the entire dependency tree from model input to generation of publication-quality figures.
 - C, Bash, Make on SunOS/Solaris
- Research Assistant, 1985-1987
 - Rodale Research Center, Kutztown PA
 - Test and improve a crop-soil simulation model using data from a long-running field experiment on the conversion from conventional to organic farming methods
 - Fortran on MSDOS

Hobbies

- co-organizer, [Princeton Python Meetup](#); founder, [OpenTaxForms.org](#)
- demo'ing science to kids; growing vegetables

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