Jonathan Lurie

Scientific Software Engineer — image processing & visualization

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WORK EXPERIENCE

June 2016 - now

McGill Center For Integrative Neuroscience (Alan C. Evans' lab)
Scientific Software Engineer, Image Processing - Montreal, Canada
Development of tools for web-based brain data visualization (MRI, fMRI, EEG, BigBrain) + writing low level binary file parsers of scientific formats.
Creation of Pixpipe (www.pixpipe.io), a pure JS image/volume processing pipeline. Bringing scientific computation to the web.
`Javascript` `Python` `WebGL` `Signal Processing` `Linear Algebra`

March 2015 - May 2016

Freelancing and self training on modern web tech
Chicoutimi, Canada
`Javascript` `Node` `C++` `WebGL` `Cartography` `AWS`

Sept. 2011 - Dec. 2014

Thales
Scientific Software Engineer, Remote Sensing, Image Processing - Toulouse, France
Ground segment software development for satellite Earth observation imaging with Pleiades Missions (Thales, CNES, ESA)
`C++` `Python` `Signal Processing` `Image Processing` `OTB/ITK` `GIS`

Sept. 2010 - Aug. 2011

Gaiddon Software
Scientific Software Engineer, Remote Sensing, Image Processing - Toulouse, France
Toolbox development for aerial image processing in order to "skin" Microsoft Flight Simulator with realistic ground surface
`C++` `Image Processing` `Signal Processing` `GIS`

March. 2010 - Aug. 2010

CS, Communication & Software (intern, 6 months)
Scientific Software Developer, Remote Sensing, Image Processing - Toulouse, France
R&D satellite image processing: implementing spectral detection algorithms to classify grounds (geological, ecological, industrial, etc.)
`C++` `Image Processing` `Signal Processing` `OTB/ITK` `GIS`

EDUCATION

2008 - 2010

Master in Bioinformatics
University of Fundamental and Applied Science - Poitiers, France
Major: Software Engineering — Major: Medical Image Processing

2007 - 2008

Licence in Bioinformatics
University of Fundamental and Applied Science - Poitiers, France
Major: Software Engineering — Major: Medical Image Processing

2005 - 2007

Licence in Life Science
University of Science and Technology - La Rochelle, France

*GIS: Geographic Information System — AWS: Amazon Web Services — OTB: Orfeo Toolbox — ITK: Insight Segmentation and Registration Toolkit

TECHNICAL SKILLS

Programming Languages	Javascript, C/C++, Python, SQL, CSS, Java, Markdown
Programming Libraries	**Image and Signal Processing:** Numpy/SciPy, ITK/OTB, OpenCV, GDAL/OGR, PIL **Graphic Rendering:** WebGL, ThreeJS, BabylonJS **Plot:** Matplotlib, D3, ChartJS **Cartography:** MapboxJS, Leaflet **Web Frameworks:** Express, Svelte **Database:** MySQL, MongoDB **Electronics:** Arduino, Raspberry Pi
Scientific Interests	Brain and medical imaging and formats, linear algebra, signal processing, image processing, statistics, trigonometry, I am also interested in computational geometry, image decomposition (i.e. wavelet), creative coding, cartography and map projection.
Other Tools and Platforms	Git/Github, AWS, Electron, Nginx, Ubuntu, Ubuntu Server, CentOS, MacOS

PROFESSIONAL SKILLS

Team Player
Software architecture design
Implementing algorithms from scientific publications
Working with a large amount of data, with performance in mind
Writing technical documentation (user guides, cookbooks)
Writing bids response (technical parts)

ADDITIONAL INFORMATION

Language	French (native speaker), English (fluent)
On the web	Personal website: http://me.jonathanlurie.fr Pixpipe website: http://www.pixpipe.io GitHub: https://github.com/jonathanlurie LinkedIn: https://www.linkedin.com/in/jolurie Twitter: https://twitter.com/jonathanlurie
Hobbies	Photography and darkroom, running, hiking, cartography, map design, coding for side projects