

# Jonathan Lurie

Scientific Software Engineer — image processing & visualization

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## WORK EXPERIENCE

- June 2016 - June 2018* **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](http://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 WebGL C++ 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 Image Processing Signal Processing ITK/OTB 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 ITK/OTB 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

## TECHNICAL SKILLS

<i>Programming Languages</i>	C/C++, Javascript, Python, SQL, HTML/CSS, Java, Markdown
<i>Programming Libraries</i>	<b>Image and Signal Processing:</b> Numpy/SciPy, ITK/OTB, OpenCV, GDAL/OGR, PIL <b>Graphic Rendering:</b> WebGL, ThreeJS, BabylonJS <b>Plot:</b> Matplotlib, D3, ChartJS <b>Cartography:</b> MapboxJS, Leaflet <b>Web Frameworks:</b> Express, Svelte <b>Database:</b> MySQL, MongoDB <b>Electronics:</b> Arduino, Raspberry Pi
<i>Scientific Interests</i>	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.
<i>Other Tools and Platforms</i>	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)

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## ADDITIONAL INFORMATION

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