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John Hoffer

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EDUCATION

HARVARD COLLEGE
BA: 2016-05 | GPA: 3.51
Concentration: Neurobiology
Secondary: Computer Science

MINOT HIGH SCHOOL
2012 | Minot, North Dakota

SKILLS

PROGRAMMING
Current Projects:
GLSL • Python • Slurm
JavaScript (D3 • Node • TypeScript)
Completed Projects:
C++ • PHP • SQL • MATLAB • LaTeX
Some Experience:
Lua • Haskell • Wolfram • CUDA
Daily Workflow:
Bash • Tmux • Vim • RegEx

DESIGN
Current Projects:
Blender (Python API) • X3D • CSS
Frequent Usage:
3ds Max • Inkscape • Gimp

COURSEWORK

COMPUTER SCIENCE
Rendering and Image Processing
Dynamic & Stochastic Processes
Computer Graphics
Visualization

LIFE SCIENCE
Computational Neuroscience
Principals of Neuroengineering
Computational Cognitive Neuro.
Cellular Basis of Neural Function
Drug Discovery and Development

EXPERIENCE

VISUAL COMPUTING GROUP | Fellow
February 2016 — today | Harvard SEAS, Cambridge, MA
- Negotiated deliverable endpoints for a major grant evaluation
- Automated ray-traced surface renderings of many image formats
- Wrote a server to send terabytes of image volume with a gigabyte of memory
- Added features to websites to view and edit densely segmented volumes

WYSS INSTITUTE | Microfabrication Intern
February—August 2015 | Boston, MA
- Designed components for development of novel microfluidic cell culture assays
- Developed and tested improved microscale fabrication procedures

MASSACHUSETTS GENERAL HOSPITAL | Research Intern
June—August 2013 | Psychiatric Genetics Unit, Boston, MA
- Prepared DNA to correlate cognitive traits with single DNA base pairs
- Identified possible genes for future study through a literature review

OPEN SOURCE PROJECTS

SLY MARKUP LANGUAGE January 2018 | Harvard VCG | Github Link
- Invented a human-friendly format to run code in parallel on Slurm clusters

OPENSEADRAGON GL January 2017 | OpenSeadragon | Github Link
- Enabled GPU-accelerated image processing of gigapixel images on the web

PUBLICATIONS

SCALABLE INTERACTIVE VISUALIZATION FOR CONNECTOMICS
August 2017 | 2nd Author | MDPI Informatics | PDF Link
- Designed and analyzed experiments on data transfer from network file systems
- Documented the design and implementation of our servers and interfaces