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**RESUME**

Beaver, William Jeffrey

Applications Development, GIS

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(520) 208-4332  
292-44-5215**EDUCATION/TRAINING**

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Arizona	MSGIST	2014  2004-2007	GIST Master's Program  Bioinformatics  Mathematics of Computer Graphics  Mathematical Modeling  Principles of Evolution  Advanced Statistics for Biology
Coursera Online Courses – Certificates of Distinction		2014  2015	Human Evolution: Past and Future – University of Wisconsin, Madison  R Programming – John Hopkins University  The Data Scientist's Toolbox – John Hopkins University  Reproducible Research - John Hopkins University  Getting and Cleaning Data – John Hopkins University  Exploratory Data Analysis – John Hopkins University
Stanford University – Stanford Center for Professional Development		2012  2011	IPad and iPhone Development  The Fourier Transform and its Applications
Marietta College	B.A.	1972	Mathematics

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## POSITIONS

Year End	Year Start	Company	Location	Job Title
	2014	SALT (Strategic Alternative Learning Techniques) Center	University of Arizona	Tutoring mathematics, programming
2014	1992	Pima Community College	Tucson, Arizona	Adjunct Faculty Digital Arts, Mathematics
2014	2006	Science Approach	Tucson, Arizona	Programmer, IT Manager
2010	2007	Osek Media	Tucson, Arizona	Project Development
2006	2005	Rock & Water Resources Library (GROW)	University of Arizona	Systems Analyst
2004	1999	Systasis Systems	Tucson, Arizona	Programmer, Analyst
1999	1997	Applied Video	Tucson, Arizona	Multimedia Development
1997	1992	JHK & Associates	Tucson, Arizona	Senior Programmer
1989	1992	Pirouette Productions	Tucson, Arizona	Computer Animator
1989	1987	Palo Verde Software	Tucson, Arizona	Programmer
1987	1979	Emergence Software	Tucson, Arizona	Director

## SKILLS

- Knowledge of most digital media including text, video, animation, and still imaging including design, processing and different file formats and compression schemes. Some digital sound experience.
- Knowledge of relational, flat and object-oriented databases.
- Programming knowledge with skills in several programming languages. The ability to quickly learn a new language.
- Knowledge of digital libraries, content management systems, course management systems and e-commerce systems.
- Worked with most web based activities and services and in one device format (Apple iPad).
- Four years managing a Fedora Linux server with about 20-30 web clients.
- As of March 2014 managing personal Ubuntu Linux server with 8 web clients and installation of PostGIS, R, GDAL, and Geoserver.
- R programming using spatial statistics and spatial point processes. Data manipulation using libraries such as dplyr.
- Tutoring college level programming in Python and Java.
- ArcGIS tools including some server experience. Erdas Imagine.
- Lidar and Remote Sensing.
- Higher level OOP design in javascript (Dojo) and Python. Work flow and some functional programming.

## PUBLICATIONS

2015	Seep App - <a href="http://overtexplorations.com/seepApp.html">http://overtexplorations.com/seepApp.html</a>	
2013	Lab Apprentice iPad App	Springs Stewardship Institute
2012	Teen Brains on Alcohol & Other Drugs	Science Approach E-Learning
2012	Your Brain Without Sleep	Science Approach E-Learning
2011	Form & Function of Individual Neurons	Science Approach E-Learning
2011	New Neurons for You After All	Science Approach E-Learning
2010	Seeing GABA <sup>A</sup> Receptors at Work	Science Approach E-Learning
2007	SIMPLE Science – <a href="http://simplescience.org">http://simplescience.org</a>	Science Approach E-Learning
2005	GROW Digital Library	GROW, University of Arizona
1999	Violin Voices, sounds of the Old Pueblo.	Applied Video
1999	Early Learning Literacy, Project Rhyme	Applied Video
1994	VTRACS – Video imaging analysis of traffic volume, size and velocity in freeway lanes.	JHK & Associates
1989	HWCA I & II, Hydrogen Water Chemistry Analysis.	Emergence Software
1986	Math Facts Mastery	Emergence Software

## RESEARCH SUPPORT

**1R43HD074327-01A1 Moore (PI) 3/1/2012-2/28-2014**  
NIH/NICHD

### **VoxelDiscovery 5-8: Engaging the Middle Grades in Visualization of the Nervous System**

The major goal of this project are to evaluate the feasibility of creating ten e-laboratory and iPad app combinations that help students apply the scientific method and neuroscience to make healthier decisions in their lives.

Role: Programming consultant

**2R42HD049973-02 Moore (PI) 7/15/2009 – 6/30/2011 NIH/NICHD**

### **Volumetric Imaging for Science Instruction of an Open Nature**

The major goals of this project are to create four e-learning modules that employ volumetric image analysis as a tool for K-12 education.

Role: Programming consultant

**1 R43 MH070250-01 Moore (PI) 3/1/2004 – 2/28/2007 NIH/NIMH**

### **NeuroVisions: Teaching Neuroscience Research Methods with Neuroimaging Data**

The major goals of this project are to test a prototype lesson for teaching psychology and neuroscience research methods at the undergraduate level.

Role: Programming consultant

**0333723 Moore (PI) 1/1/2004 – 12/31/2006 NSF/NSDL**

### **SIMPLE Science: Image-based learning tools for K-12 education**

The major goals of this project are to develop a collection of online activities that simplify the process of using image analysis for middle school science education.

Role: Programming consultant

**NNHo4ZNS003N Moore (PI) 7/1/2005 – 6/30/2007 NASA HQ**

### **Visual Instruction Support for Inquiry-based Odysseys in the NASA Explorer Schools**

The major goals of this project are to provide GIS and image analysis professional development for

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the NASA Explorer Schools.  
Role: Programming consultant

**0323127 Moore (PI) 9/1/2003 – 8/31/2006 NSF/ITEST**  
**Ocean Explorers: Using GIS and IPA for Dynamic Ocean Science Education**  
**National Science Foundation ITEST Program,**

The major goals of this project are to provide professional development on geographic information systems, image analysis, and ocean science for middle and high school teachers in California.  
Role: Programming consultant

**0121691 Budhu (PI) 09/15/2001- 09/15/2005 NSF DUE**  
**Geotechnical, Rock and Water Resources Library (GRAWRL)**  
**Towards a National Civil Engineering Education Resource Library**

This project is promoting wide-spread access to quality information, resources, and activities in support of learning, teaching, and research in the areas of geotechnical engineering, rock engineering, and water and its use. The effort is envisioned as a component of a larger national civil engineering digital library providing "one-stop" access to resources to meet the learning, teaching and research needs of a wide audience including higher education, professionals, and the community at large.  
Role: Systems Developer

## REFERENCES

J David Betts, Ph.D.  
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Department of Teaching, Learning & Sociocultural Studies  
University of Arizona  
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