

Appendix One: Resumes

Robert Cheetham, President and Project Director

Robert Cheetham is the founder and president of Azavea. He founded Azavea to develop software that makes sophisticated geographic analysis tools available on the Internet. Robert's skills straddle project management, business operations, software development, spatial modeling and web-based software architecture. He has over fourteen years of experience designing and developing web-based GIS solutions on a broad range of technology infrastructure platforms.

Recent Accomplishments

- Oversees design and development of Azavea products including the DecisionTree® geographic prioritization system, the Cicero election officials database and web services, the Kaleidocade™ geographic indicators system, the Sajara® digital asset management system and the HunchLab™ geostatistical analysis and alerting system.
- Guides Azavea's research and development efforts.
- Designed and developed the SmartConservation site assessment tools for the Natural Lands Trust. The SmartConservation web site leverages ESRI's ArcObjects and ArcIMS technology to enable land trusts, local governments and conservationists to perform landscape ecological assessments for any arbitrary parcel of land in Southeast Pennsylvania.
- Designed and developed a web-based crime analysis system that enables any police officer in the Philadelphia Police Department to perform their own mapping, analysis and reporting from a database containing more than 20 million records.
- Designed an economic development application, called DecisionMaps, that enables business owners and entrepreneurs to create sophisticated geographic models for locating optimal business sites.
- Designed and co-developed REX, a real estate information system targeted at home buyers that enables them to match locations they can afford with locations that match their preferences. REX is based on a complex, geographic price model that is paired with the ability to find the best neighborhood for an individual's lifestyle.

Professional History

- Azavea Inc, Founder and President, 2000 – Present
- University of Pennsylvania, Software Developer, Lecturer, Project Manager, 1995 - 2003
- City of Philadelphia, Senior GIS Developer, GIS Services Group, 1999 – 2001
- Philadelphia Police Department, Crime Analyst, 1997 – 1999
- City of Konan-cho, Japan, Coordinator for International Relations, 1991 – 1994

Education

- University of Pennsylvania, MLA, Landscape Architecture and Regional Planning, 1997
- University of Michigan, BA, Japanese Studies, 1991

Abigail Fretz, Project Manager

Abby Fretz has over seven years of experience in marketing, project management, and product design. She has managed the content and design development for several marketing campaigns for a prominent Philadelphia-based event planning company. Ms. Fretz directed several annual, community-based, food education projects with groups from Philadelphia-based schools. At Azavea, Abby is the project manager for the legislative district matching and elected official lookup API, Cicero, and is a part of the marketing and business development team, where she writes copy for press releases, company websites, the company newsletter, and other marketing materials. Additionally, Abby is the marketing liaison to the Cicero team, working with them to strategize upcoming business development and marketing activities.

Recent Accomplishments

- Manages product development for District Builder application
- Project Manager for the Arizona Competitive Districts Coalition project
- Managed spatial data acquisition and incorporation for Cicero API 2006-2010, significantly increasing geographic coverage of product.
- Designed and managed the production of RedistrictingtheNation.com website.
- Designed and managed the production of Online Citizen's Guide for Committee of Seventy

Professional History

- Azavea Incorporated, Product Development Manager, 2006 – present
- Peachtree & Ward, Marketing Coordinator, Product and Event Design, 2003 – 2006

Education

- Community College of Philadelphia, Proficiency Certification in GIS
- Eastern Mennonite University, BA in Art & Communications, BA in Justice, Peace and Conflict Studies, 1997-2001

Andrew Jennings, Lead Software Developer

Andrew Jennings is a software developer and IT support specialist. Mr. Jennings provided comprehensive technical support to the development office of PENN Medicine for five years. He developed systems to transmit gifts to the health system and acknowledge donors, established a telecommuting infrastructure and updated the office's network and server infrastructure. After completing graduate school, Mr. Jennings took a job at Azavea, where he works as a software developer and IT professional. Mr. Jennings is the lead developer for Cicero, Azavea's elected-official-information web service, He is also a developer for the Kaleidocade Indicators Framework, an Azavea solution that allows customers to view their data in many chronological and geographical formats, and was a developer for Sandstone, a java-based product that will be used by conservationists to catalog historic sites and calculate restoration costs. In addition to his software-development work, Mr. Jennings also provides IT support for Azavea's users and systems. He has migrated Azavea to an Active-Directory domain, rolled out software packages through Group Policy, and has integrated virtual machines into Azavea's workstation and server infrastructure.

Recent Accomplishments

- Migrated Cicero web service from ArcIMS to MapServer
- Created .Net-based web application to demonstrate the capabilities of Cicero
- Worked with other Sandstone developers to create peer-to-peer based framework to synchronize data among clients
- Assisted with re-factoring of Kaleidocade Indicators Framework into KIF Lite, a javascript-based web application that provides simpler views of the data available to Kaleidocade customers.

Professional History

- Azavea Inc., 2008-present
- PENN Medicine

Education

- Penn State University, BA, Journalism
- University of Pennsylvania, Master of Computer and Information Technology

Kenneth Shepard, Software Developer

Mr. Shepard has over 6 years experience in software design, development and maintenance. He has previously worked in the financial services world, where he designed and developed several applications used for the automated electronic trading of various financial instruments. Currently, Mr. Shepard is responsible for the development of web-based mapping solutions based upon ESRI ArcGIS and Microsoft .NET technologies. Mr. Shepard also has experience with user interface design and service-oriented architecture.

Recent Accomplishments

- Developed several rich client-side pages for HunchLab, a web-based crime visualization, early warning and risk forecasting application. Features developed include a widget-based dashboard, a comprehensive analysis system, and a risk forecasting section that allows the visualization of near-repeat patterns.
- Developed an ASP.NET web application for the International Association of Chiefs of Police that allows police agencies to enter and retrieve survey information for programs focusing on youth services. Microsoft Virtual Earth is utilized to provide spatially-aware searching and viewing of results.
- Developed a Windows Forms application and an ASP.NET web application used jointly by the Bureau of Alcohol, Tobacco and Firearms and the Philadelphia Police Department for initiating and researching firearms trace requests.
- Designed and developed a framework for the development and administration of automated trading systems. Oversaw the entire lifecycle, from early brainstorming sessions to full release, and dozens of version upgrades.
- Developed several automated trading systems in Java and C# based on the ideas and specifications of financial researchers. The concepts and designs used to create these systems played a key role in the development of a trading system framework.
- Designed and developed a C# service used for fragmenting trade quantities and releasing orders to various executing brokers based on current market conditions.

Professional History

- Azavea Inc., Software Developer, 2008 – present
- Graham Capital Management, Software Developer, 2004 – 2008

Education

- University of Connecticut, Bachelor of Science and Engineering, Computer Science and Engineering

Dr. Michael P. McDonald, Subject Matter Expert

Associate Professor, George Mason University
Non-Resident Senior Fellow, Brookings Institution
Department of Public and International Affairs
4400 University Drive MSN 3F4 Fairfax, VA 22030-4444

Office: 703-993-4191
Fax: 703-993-1399
Email: mmcdon@gmu.edu
Web: <http://elections.gmu.edu>

Education

Post-Doctoral Fellow. Harvard University. August 1998 – August 1999. Ph.D. Political Science. University of California, San Diego. February, 1999. BS Economics. California Institute of Technology. June, 1989.

Academic Experience

George Mason University

- Associate Professor. May 2007 – Present.
- Assistant Professor. Aug 2002 – May, 2007.

The Brookings Institution

- Non-Resident Senior Fellow. January 2006 – Present.
- Visiting Fellow. June 2004 – December 2006.

University of Illinois, Springfield. Assistant Professor. Aug 2000 – June 2002.
Joint appointment in Political Studies Department and Legislative Studies Center.

Vanderbilt University. Assistant Professor. Aug 1999 – Aug 2000.

Harvard-MIT Data Center. Post-Doctoral Research Fellow. Sept. 1998 – Aug 1999.
Developed Virtual Data Center, a web-based data sharing system for academics. Maintained Record of American Democracy (U.S. precinct-level election data).

University of California-San Diego

- Assistant to the Director for University of California, Washington DC program. Sept 1997 – June 1998.
- Instructor for research methods seminar for UCSD Washington interns.
- Visiting Assistant Professor. Spring Quarter 1997.
- Visiting Assistant Professor. Summer Session, Aug 1996 and Aug 1997.
- Teaching Assistant/Grader. Aug 1991 – March 1997.

Selected Related Professional Experience

Redistricting/Elections Consultant.

- Consultant. 2011. Virginia Governor's Independent Bipartisan Advisory Redistricting Commission.
- Consultant. 2011. New Jersey State Legislative Redistricting Commission.