Joshua Rodriguez

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SKILLS & QUALIFICATIONS

Software
- ArcGIS
- AutoCAD
- Microsoft: Word, Excel, & Office
- Adobe Illustrator & Photoshop
- ENVI

Languages
- Python
- HTML
- CSS
- Javascript
- JQuery
- SQL
- Fortran

Equipment Experience
- GeoExplorer Series GPS unit
- Total station
- Garmin GPS Unit
- ArcPad
- Chemistry equipment

Disciplines
- GIS Analysis
- Programming
- Project Management
- Web Development
- Graphic design
- Cartographic design
- Remote sensing

EDUCATION

8/09 – 12/16 **B.S. Environmental Science (Geospatial Option)**, *Humboldt State University - Arcata, CA*

PROFESSIONAL EXPERIENCE

8/17-Present **GIS Technician**, *Apple via Apex Systems - Sunnyvale, CA* - Responsible for content analysis, validation, cleansing, collection and reporting. Analyze and validate data content and assemble new content from various sources, including databases, and files/spreadsheets. Respond to data inquiries from various groups within the organization. Create and publish regularly scheduled and/or ad hoc reports as needed. Lead a specialized team of technicians in the evaluation, management, editing, and production of geo-spatial data.

9/16-3/17 **Geospatial Database Management Assistant**, *Humboldt State University - Arcata, CA* -Provided technical assistance in developing and manipulating environmental and geographic data for geospatial analysis. This involved online scouting of environmental and natural resource data on websites of state and federal agencies as well as manipulating text, CSV, and GIS data using spreadsheets, databases, and Esri software. Additional preprocessing included cleaning, filtering, and checking the quality of the data. Database management tasks included proper file organization, joining database tables and extracting geospatial data, which ultimately was processed into a geo-database.

9/16-12/16 **Front-End Web Developer**, *Pacific Watershed Associates - Arcata, CA* - Created a finished working interactive map for Pacific Watershed Associates (PWA). Was tasked to generate the overall design, and functionality of the interactive map to display relevant stream data from PWA's Telemeter devices. The functionality of the site consisted of: accessing live data by utilizing a web-service call and displaying the desired data in a Javascript charting package from user selected time and stream measurement options,

as well as displaying their geographic locations and device names. Other tasks included diligent programming practices and proper documentation, file organization, generating web icons utilizing Adobe Illustrator, and creating step-by-step instructions for client management.

6/15-12/16 **Geospatial Analysis Intern/Web Developer**, *Humboldt State University - Arcata, CA* - Responsible for aiding in the development and completion of a new interactive map for Humboldt State University using HTML, CSS, and Javascript/JQuery. Tasks included database management, file organization, generating web icons utilizing Adobe Illustrator and Photoshop, and completing the overall design and interactivity of the project.

6/15 – 8/15 **Geospatial Analysis Intern**, *Humboldt State University - Arcata, CA* - Responsible for georeferencing an AutoCAD drawing of HSU into ArcGIS. Collected geographic data with a Trimble GeoExplorer Series GPS unit on existing exterior lights to retrofit campus infrastructure with new exterior LED lights. Labeled and generated exterior light symbols on Humboldt State's AutoCad drafting schematic.

6/15 – 8/15 **Geospatial Analysis Intern**, *Humboldt State University - Arcata, CA*
Lead a team of students to gather base information for a new interactive map of HSU, utilizing AutoCAD, ArcMap, and Python to produce shapefiles to be used in this project. Also responsible for creating a protocol for students to follow instructions on uniformity on documentation, editing etiquette, how to use and manipulate a high-resolution GPS unit, and convert CAD drawings into shapefiles.

RELAVENT COURSES

GSP 101 Geospatial Concepts
GSP 270 GIS
GSP 370 Intermediate GIS
GSP 216 Remote Sensing
GSP 326 Intermediate Remote Sensing
GSP 318 Geospatial Programming
GSP 316 Cartography
GSP 330 Mobile Mapping
GSP 416 Advanced Cartography
GSP 470 Advanced GIS

PREVIOUS RESEARCH

- **Mapping Bark Beetle Infestations in the Rocky Mountain National Park from 2014-2016.** Assessed the impact of bark beetle infestation in the Rocky Mountain National Park region from 2014 to 2016 utilizing remote sensing techniques. The changes in forest vegetation health between the two years were analyzed by how many individual trees, or acres of trees that have been impacted by bark beetle infestation, *Fall 2016*
- **Bathymetry of Eureka Slough.** Utilized spatial interpolation methods, such as Inverse Distance Weight (IDW), Spline and Kriging**,** to generate both 2-D and 3-D bathymetric models from ArcMap and ArcScene, respectively, *Fall 2015*
- **Vegetation Health Improvements from the Effects of Soil Contamination Near Tree Canopy at Annapolis Lead Mine, Annapolis, MO.** Conducted a remote sensing analysis to compare and contrast the tree canopy health of the Annapolis Lead Mine in 2009 and 2012, which consisted of previously contaminated soil and heavy metals, *Fall 2015*
- **ASCE Mid-Pacific Student Water Treatment Competition.** Participated in a student competition that challenged teams to design and build a water treatment process from a set list of materials commonly found at a local hardware store, *February-April 2014*

- **Case Study: Humboldt State University Waste Management**. Assisted with a case study on Humboldt State University's Hazmat facility and their "cradle to grave" procedures, how wastes are stored, packaged, transported and disposed, and waste minimization efforts, Hazardous Waste Remediation semester project, *Spring 2014*
- **Suspended Sediment Discharge Distribution Fitting for Lake Tahoe, CA**. Helped conduct a probability distribution fitting for the mean suspended sediment discharge rate falling under the acceptable discharge rate for Lake Tahoe to retain low turbidity levels. Environmental Data Modeling & Analysis course semester project, *Fall 2013*
- **Water Quality Analysis of Sites T4L and T4M on Janes Creek, Arcata CA**. Helped conduct a 10-week study conducted on specific sites of Janes Creek, Arcata, CA, that measured and assessed a number of parameters in an attempt to assess the health of that section of the stream and quantify the effect of nearby animal pasturing and industry. Water Quality & Environmental Health semester project, *Spring 2013*

REFERENCES

Dr. James Graham — **Assistant Professor**, *Humboldt State University - Arcata, CA*
Email: james.graham@humboldt.edu
Phone: (707)-826-3823

Dr. Amy Rock — **Lecturer**, *Humboldt State University - Arcata, CA*
Email: aer389@humboldt.edu
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Dr. Lawrence Fox III — **Professor Emeritus**, *Humboldt State University - Arcata, CA*
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