Chris Matechik

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M.S. Degree in Fisheries *August 2014*
Auburn University, Auburn, AL

B.S. Degree in Biology with Honors, Minor in Chemistry *April 2011*
Florida State University, Tallahassee, FL
Focus on Ecology and Evolution, Certificate in Marine Biology
Honors Program, Cum Laude

Work Experience

DEVELOP Team Lead *May 2022 - present*
NASA, Langley Research Center, Remote
Lead a team using NASA and NOAA satellite data to map lightning-induced wildfires to aid Chile's Corporación Nacional Forestal (CONAF) in preventative planning. Serve as the point of contact among team and all partners.

DEVELOP Participant *January 2022 – May 2022*
NASA, Goddard Space Flight Center, Remote
Used NASA Earth Observations (e.g. Landsat, Modis) sourced from Google Earth Engine in conjunction with *in situ* datasets to predict ecological change in ArcGIS Pro and inform resource management decisions. Completed training courses in Python, Google Earth Engine, Remote Sensing, and GitLab

Research Assistant *July 2019 – present*
Apalachicola Bay System Initiative, FSUCML, St. Teresa, FL
Manage and analyze quantitative and spatial data in R, ESRI programs, MS Access, and PostgreSQL. Create data collection apps in Survey123 and Field Maps. Ensure that sampling procedures comply with all federal, state, and university regulations. Supervise technicians while in the field and lab.

Environmental Specialist I *January 2017 – July 2019*
Apalachicola National Estuarine Research Reserve, FLDEP, Eastpoint, FL
Manage spatial in ArcGIS Enterprise. Created web app to expedite spatial data collection. Created automated queries to quickly pull data for reports. Apply prescribed fire and fight wildfires under the federal Incident Command System (ICS).

Research Assistant *January 2015 – January 2017*
FSU Coastal and Marine Laboratory, Florida State University, St. Teresa, FL
Assisted with technical and logistical aspects of research projects. Converted data collected by remote underwater vehicles (ROVs) to formats compatible with ArcMap. Summarized and analyzed data. Completed field and lab work as needed.

Fish and Herp Field Surveyor *May 2014 – September 2014*

Amnis Opes Institute, Bend, OR
Conducted stream surveys across Washington State. Collected biotic, abiotic, and spatial data. Worked 7 day weeks for the duration of the contract and lived out of remote field camps.

Fisheries Technician   May 2011 – October 2011
Wyoming Game and Fish Department, Green River, WY
Surveyed streams for native and invasive fish species. Navigated and collected data using GPS units. Maintained equipment. Lived out of remote field camps for up to 30 days.

General Experience
- Manage data in PostgreSQL, Microsoft Access, and ESRI programs
- Analyze data and write reports
- Maintain dynamic geodatabases
- Present data and management plans at scientific and public meetings
- Recommend management actions that will balance the desires of stakeholders with the needs of threatened and endangered species
- Communicate with government agencies and the public on a regular basis
- Collaborate with state agencies to develop restoration plans
- Apply for research permits
- Supervise technicians, and interns
- Mentor young researchers in the NOAA Hollings Scholar and FSU UROP programs

Computer Proficiency

ArcGIS Pro and ArcMap
Automate tasks using Python, SQL, and Arcade expressions, create maps, import data layers, import shapefiles from Trimble devices, edit shapefiles, basic operations (e.g. clip, buffer, cut), integrate with Survey123 and Collector.

ArcGIS Online
Create hosted online maps and layers, share maps internally or with partner agencies so data can be viewed and edited by multiple people in real time, manage groups and share settings, dynamically update web maps via custom apps.

Survey 123
Create user friendly apps for collecting geo-referenced data on tablets, smartphones and computers, program apps to automatically calculate values based on previously collected data, upload custom base maps created in ArcMap, streamline data collection, send data to other ESRI programs using ESRI's custom URL scheme.

Field Maps / Collector
Create custom base maps and configure layers in ESRI environment so users can add and edit features from their smartphones or field tablets, link Collector and Survey123 so users can utilize Collector's advanced mapping features and Survey123's smart forms, incorporate Arcade expressions to update symbology on the fly.

Google Earth Engine

Acquire satellite based remotely sensed data. Mask out undesirable pixels (e.g. clouds, snow). Export data to other GIS programs.

R and R Studio

General linear models (e.g. regression, ANOVA, t-tests), generalized linear models (e.g. Poisson regression, logistic regression), mixed effects models, and multivariate analysis (e.g. principle component analysis, discriminant function analysis), general additive models, geospatial analysis.

Python

Completed introduction to python course. Understand object oriented programming and dictionaries. Able to use python to automate tasks such as automatically backing up data, appending data. Use Arcpy to accomplish tasks in ArcGIS.

SQL

Use SQL to manage data in PostgreSQL (with PostGIS add-in)

ESRI Training

▪ Archiving Data in a Multiuser Database	*November 2020*
▪ Integrating Data in ArcGIS Pro	*October 2020*
▪ Getting Started with Data Management	*June 2020*
▪ Space-Time Analysis: Time Series Clustering	*June 2020*
▪ Getting Started with the Geodatabase	*June 2020*
▪ Going Places with Spatial Analysis	*October 2019*

Continued Learning Related to GIS (non-degree seeking)

▪ Introduction to Python, CGS 3465	*Summer 2021*
▪ Applied Spatial Statistics, GIS 5122	*Spring 2021*
▪ Geodatabases, GIS 5112	*Fall 2020*

Awards

▪ FL DEP Star Award -Limerock Wildfire Response	*December 2018*
▪ FL DEP Star Team Award – St Joseph Bay Prescribed Fire Team	*December 2018*
▪ FSU Undergraduate Research and Creative Activity Award - $4,000	*March 2010*
▪ Dean's List - Spring 2008, Fall 2009, Spring 2010	*Fall 2010*
▪ Florida State University Freshman Scholarship - $9,600	*May 2007*

Organizations

▪ Oyster Integrated Mapping and Monitoring Program	*August 2019 – present*
▪ Apalachicola Regional Stewardship Alliance	*April 2014 – 2019*
▪ FSU Council of Undergraduate Research and Creativity	*May 2010 – April 2013*