**Chris Matechik** (850)-323-2503

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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 – August 22*

**NASA, Langley Research Center, Remote**

* Lead a team using NASA and NOAA satellite data to map wildfire risks to aid Chile’s Corporación Nacional Forestal (CONAF) with preventative planning.
* Utilized NASA MODIS, VIIRS, and GOESS remote sensing data.
* Served as the point of contact among team and all NASA partners.
* Participated in bilingual meetings.
* Taught colleagues how to code and efficiently utilize GIS programs.

**DEVELOP Participant** *January 2022 – May 2022*

**NASA, Goddard Space Flight Center, Remote**

* Used NASA Landsat and MODIS Earth Observations sourced from Google Earth Engine in conjunction with *in situ* datasets to predict ecological change in areas inhabited by the endangered Atlantic salmon.
* Analyzed changes in land use and land cover across Maine from 1985-2020 and projected changes into 2040 using ArcGIS Pro and TerrSet.
* Created ESRI Story Map to visually present results.
* Completed training courses in Python, Google Earth Engine, Remote Sensing, and GitLab.
* Presented research to partners and GIS classes.

**Research Assistant** *July 2019 – July 2022*

**Apalachicola Bay System Initiative, FSUCML, St. Teresa, FL**

* Managed and analyzed quantitative and spatial data in R, ESRI programs, MS Access, and PostgreSQL.
* Created data collection apps in Survey123 and Field Maps.
* Created web maps that dynamically updated as new data were collected.
* Prepared maps and reports for stakeholder meetings and scientific presentations.
* Surveyed habitat using UAV’s and side scanning sonar.
* Supervised technicians while in the field and lab.
* Mentored researchers in the FSU Undergraduate Research Opportunity Program.

**Environmental Specialist I** *January 2017 – July 2019*

**Apalachicola National Estuarine Research Reserve, FLDEP, Eastpoint, FL**

* Managed spatial data in ArcGIS Enterprise.
* Created a web app to expedite data collection for endangered sea turtle nesting surveys.
* Created automated queries to quickly consolidate and export data for reports.
* Applied prescribed fire to improve terrestrial habitat and reduce fuel loads.
* Responded to wildfires including the destructive Limerock Fire in Eastpoint, FL.
* Mentored young researchers in the NOAA Hollings Scholar Program.

**Research Assistant** *January 2015 – January 2017*

**FSUCML, 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.
* Ensured compliance with federal and state regulations.
* Summarized and analyzed data using GLM’s in R Studio
* Initiated a side project restoring a tract of longleaf pine owned by the FSUCML

**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*

**Computer Proficiency**

**ArcGIS Pro and ArcMap**

* Automate tasks using Python, SQL, Git, and Arcade expressions
* Classify raster imagery using supervised and unsupervised methods
* Edit shapefiles, query data, perform basic operations (e.g. clip, buffer, cut)
* Create and manage mosaic datasets, raster datasets, geodatabase
* Utilize raster functions and raster calculator expressions
* Integrate with Survey123 and Collector.

**ArcGIS Online**

* Create hosted online maps and layers and share maps internally or with partner agencies so data can be viewed and edited by multiple people in real time
* Manage groups, permissions, and sharing 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
* Send data to other ESRI programs using ESRI’s custom URL scheme

**Field Maps / Collector**

* Link Collector and Survey123 so users can utilize Collector’s advanced mapping features and Survey123’s smart forms in a single workflow
* Dynamically update symbology based on feature attributes via Arcade expressions

**Google Earth Engine**

* Acquire satellite-based Earth observations
* Mask out undesirable pixels (e.g. clouds, snow, ice)
* Export data to other GIS programs

**R and R Studio**

* General linear models (e.g. regression, ANOVA, t-tests) and 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 data dictionaries
* Use looping to iterate recursive tasks
* Define and utilize functions to create modular scripts
* Automate data management tasks
* Use Arcpy to perform workflows in the ArcGIS environment

**SQL**

* Manage data in PostgreSQL (with PostGIS add-in)
* Create automated reports from SQL queries.