



Samuel Smock

CONTACT

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COMPUTER SKILLS

ArcGIS / QGIS  Advanced

MS Office  Advanced

Python  Proficient
Pandas / SciPy

3D Modelling  Intermediate
Craftware, Sketchup

Javascript  Intermediate
jQuery / React

Google Earth Engine  Intermediate

Building Energy Modelling  Intermediate
eg EnergyPlus

EDUCATION

11/2023

University of Leipzig | Ca' Foscari University

M.Sc. Joint International Degree Program in Sustainable Development,

Thesis: *Quantifying The Economic Value of Heat Pump Retrofits to Building Owners:*

A Geospatial Approach

Leipzig, Germany | Venice, Italy

05/2012

Columbia University School of Engineering

B.S. in Applied Physics, Cum Laude

Focus Area: Atmospheric Dynamics

New York, USA

RELEVANT COURSEWORK

- **Sustainability Assessment of the "Energiewende,"** Universität Leipzig 2023

- **Environmental and Climate Economics,** Ca' Foscari University 2022

- **Integrated Assessment of Climate Protection Strategy,** Universität Leipzig 2021

- **Renewable Energy Sources,** Ca' Foscari University 2022

- **Geographic Information Systems,** Ca' Foscari University 2022

- **Analyzing Data With Python,** Codecademy 2021

SELECT PROFESSIONAL EXPERIENCE

09/2023 - Present

Research Assistant, German Center for Integrative Biodiversity Research (iDiv)
Leipzig, Germany

- ✕ Works with global geospatial data to investigate the effect of population density and income on urban greenspace
- ✕ Uses Google Earth Engine to run parallel processing tasks on larger-than-memory spatial data sets
- ✕ Programs interactive and dynamic economic preference surveys using JavaScript and HTML

05/2017 - 09/2021

Owner Operator, Rebuild Greener!
New Orleans, USA

- ✕ Sized, designed, and installed heat pump and solar PV systems
- ✕ Carried out whole-home renovations and new "tiny" home construction with a focus on energy efficiency
- ✕ Represented clients with local and state agencies on permitting, zoning, code compliance, and tax incentives
- ✕ Assembled project proposals including 3-D models and plans for the municipal safety and permitting office

LANGUAGES

English



Native Speaker

Spanish



C1

German



B2

RESEARCH AND ACADEMIC COMPETENCIES

- Deep mathematical background
- Skilled in data acquisition
- Geospatial problem solving
- Literature review expertise
- Skilled technical writer

“SOFT” SKILLS

- Strong time management and organizational Skills
- Respectful in the face of disagreement
- Eye for graphic design and keen sense for detail

OTHER INTERESTS / SKILLS

- Passionate DIYer with a love for natural building and off-grid living
- Welding, light construction , plumbing and electric
- Multi-instrumentalist, and digital music producer

01/2020 -
09/2021

Freelance Web Developer

New Orleans, USA

- ✕ Designed and built a number of reactive and eye-catching websites using React and jQuery
- ✕ Maintained and updated online stores using cloud-based development environments

11/2016 -
11/2019

Operations Manager, Parleaux Beer Lab

New Orleans, USA

- ✕ Installed and maintained mechanical facilities including glycol chiller and other heating and cooling systems
- ✕ Designed and implemented automated production and packaging processes
- ✕ Oversaw a small team on production procedures, graphic design, quality assurance and regulatory compliance

09/2013-
01/2014

Biological Field Technician, Grasslands Consulting

Golden, USA

- ✕ Insured regulatory compliance with the Endangered Species Act at hydraulic fracturing sites in Utah's Uinta Basin
- ✕ Planned field sweeps to map locations of endangered cacti using Esri's ArcPad

07/2012
01/2013

Geodata Intern, DAAD Rise Pro / Beak Consulting

Freiberg, Germany

- ✕ Prepared data from local and online sources using ArcMap and ArcCatalog
- ✕ Predicted resource abundance, erosion, and natural disasters using the machine-learning GIS plugin, Advangeo
- ✕ Translated contract bids from English to Spanish

11/2011-
05/2012

Laboratory Technician, Columbia Lab for

Unconventional Electronics (CLUE)

New York, USA

- ✕ Developed and built a thin film Ni-Li battery for use in wearable solar cells
- ✕ Programed a battery testing routine using Python and an Arduino chip

PUBLICATION

Hannah K. Ross , John Cooney , Megan Hinzman , **Samuel Smock** , Gary Sellhorst , Ralph Dlugi , Nicole Mölders, Gerhard Kramm. (2014). Wind Power Potential in Interior Alaska from a Micrometeorological Perspective. *Atmospheric and Climate Sciences*, 4, 100-121. doi:10.4236/acs.2014.41013