Casey Slaught

Experienced full-stack engineer focused on building intuitive geospatial applications that help people make better decisions about ecosystems and natural resources.

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caseyslaught.com

Experience

Software Engineer / Technology Project Manager • Virunga National Park
Jan 2020 – Aug 2022 and Jan 2016 – Aug 2017 | Democratic Republic of the Congo

- Designed real-time alert system for communities to report rebel incursions, leading to faster response times from security forces, using LoRaWAN, Django, and React
- Created cloud-based spatial data integration system to track patrols and park vehicles from several data sources, improving operational efficiency and reducing security risks using Python on AWS Lambda and served with S3 and CloudFront
- Developed remote sensing apps with Google Earth Engine to monitor deforestation and agriculture, quantifying the economic value of illegal resource extraction
- Established drone surveillance and mapping program to improve safety of patrols and understanding of agricultural practices and invasive species

Co-Founder / Lead Software Engineer • quip.link
Mar 2018 – Feb 2020 | Kigali, Rwanda

- Designed and engineered web platform that links informal hardware shops with institutional buyers to reduce inefficiencies in construction materials market
- Managed team of two remote frontend developers, delivering results on time by developing Figma designs, detailed work plans, and regular code reviews
- Designed secure and scalable cloud architecture with Django and MySQL on AWS

Founder / Lead Software Engineer • Caracal
Jan 2019 – Dec 2020 | Kigali, Rwanda

- Designed and implemented geospatial automation tool for conservation areas to connect sources of spatial data, such as wildlife tracking collars, with ArcGIS Online and Google Earth, using PostGIS with AWS RDS, Kinesis, and Lambda
- Developed frontend app with team of two remote developers using Gatsby
- Received competitive Early Career grant from the National Geographic Society

Education

Master of Environmental Management • Duke University
Aug 2021 – May 2023
- Developed Smart Carte, thesis project on cloud-based remote sensing that aims to help non-technical users like conservationists access earth observation insights
- Additional coursework in geospatial analysis, environmental statistics, resource economics, and entrepreneurship

B.S. in Computer Science • New York University
Aug 2012 – Dec 2015
- Coursework in web technologies, operating systems, cybersecurity, algorithms, data structures, Russian language, and primate conservation

Skills

Programming languages
Python, JavaScript, TypeScript, HTML, CSS, SQL

Natural languages
English: fluent
French: proficient

Libraries and frameworks
Django, GDAL, React, Next.js, PyTorch

Tools and Platforms
AWS, Docker, Figma, Git, ChirpStack

Projects

Smart Carte
Web application for preparing cloud-free Sentinel-2 imagery and land cover classification over large areas. Developed complete segmentation pipeline, from labeling to training.

React, Python, PyTorch GDAL, AWS, Labelbox

smartcarte.earth

SimpleDroneMaps
Aerial imagery management tool to help drone operators and researchers host orthomosaics, satellite imagery, and 3D models and share them easily with clients or colleagues. Uses map tiling with CDN to visualize very large orthomosaics.

Next.js, Python, GDAL, AWS

simpledronemaps.com

Interests

Cycling, songwriting, French language, mnemonics, plants