

Andrew Yen

CONTACT

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please visit my website at: andrew-yen.com

EDUCATION

- **MS in Geographic Information Systems**
Johns Hopkins University
January 2018 — September 2019
- **BA in Ethnographic Research**
CUNY Baruch College
August 2009 — February 2014

EXPERIENCE

- **Geospatial / Remote Sensing Data Engineer (Contract)**
The Climate Corporation (2020 — 2022)
San Francisco, CA
- **GIS Lead Technician (Contract)**
Apple (2020)
Sunnyvale, CA
- **GIS Technician (Contract)**
Apple (2019 — 2020)
Sunnyvale, CA
- **Tool Library Volunteer**
Station North Tool Library (2014 — 2018)
Baltimore, MD

DATA SCIENCE, PROGRAMMING & DATABASE SKILLS

- Scalable pipelines for remote sensing and geospatial data using PySpark and Descartes Labs APIs
- Configuring cloud computing environments (e.g. Descartes Labs, Google Earth Engine, Domino) for designing scalable geospatial pipelines
- Scripting with geoprocessing functions using arcpy, pyQGIS, geopandas, GDAL, shapely, rasterio, PIL, RasterFrames, scikit-image, scipy-ndimage, opencv, etc.
- Programmatic multi-dimensional raster data analysis including array operations with xarray, numpy and numpy.ma, as well as computer vision techniques with python opencv
- Scalable operations and indexing for large geospatial datasets on AWS S3 with the AWS CLI
- EDA and data visualization for large and temporally dense geospatial datasets
- Proficiency with ESRI mapping applications including ArcGIS Pro, ArcMap, ArcGIS Online
- Web mapping application development with ArcGIS Javascript API
- Automated generation of map documents
- Machine learning algorithms (Random Forest classification/ regression, Kmeans clustering) and statistical analysis of results
- SQL queries in PgAdmin and Python (psycopg2, PySpark)
- High-quality labeled imagery production for model training with Appen and AWS Sagemaker GroundTruth labeling platforms

RESEARCH SKILLS

- Operationalization of research question derived from qualitative inputs
- Survey and Interview design
- Participant Observation and field recording/notes
- Academic & Technical writing

PROJECT DEVELOPMENT & MANAGEMENT SKILLS

- Develop document/form/communication templates
- Convert program goals to action items
- Conducting interviews and hiring candidates that fit project needs
- Evaluation of prospective vendors by comparing functional and scalability capabilities with organization needs
- Evaluation of vendors for contract renewal by compiling documentation on usage, outages, new features, bug fixes, etc.
- Managing subcontractors tasked with generating labeled data for computer vision model training. Includes technical writing for instructions, creating instructional videos, negotiating costs and timelines, providing clear feedback, and preparing clear imagery data for the subcontractors.

AGRICULTURE AND AGRONOMIC SKILLS

- Retrieval and analysis of publicly available agricultural datasets at scale (Cropland Data Layer, NASS survey data, SSURGO, ERA5, and others) as well as proprietary machine data (seeding rate, wet mass, field boundaries, etc.)
- Research on various tillage practices and trends in North America and Europe and relationship with corn and soybean disease risk
- Research on pivot irrigation practice and trends in North America and Brazil as well as computer vision applications for pivot irrigation detection.
- Practice in food plant cultivation in urban and rural contexts, composting and compost application techniques, managing automated irrigation systems; able to work long hours outdoors