THIBAULT FANEY

in/thibaultfaney/

publications

ABOUT ME

I am a tech-enthusiast at the crossroads of numerical simulation, artificial intelligence and geographic information systems. I am detail-oriented and thrive on developing cutting-edge software to solve real-world problems in practical applications.

EDUCATION

PhD in Nuclear Engineering
UC Berkeley | 2010-2013
Thesis title: Numerical simulations of Tungsten under helium irradiation

MSc in Nuclear Engineering
UC Berkeley | 2008-2009

Bachelor and MSc in Engineering
Ecole des Mines de Paris | 2005-2008

LANGUAGES

- French, English: bilingual
- Spanish, German: intermediate

HOBBIES

- Competitive Tennis, skiing and snowboarding, hiking
- Acting

EXPERIENCE

Co-Founder and CTO| Apr 2019 - Present
Casablanca, Los Angeles
Automated data processing, generation and analysis for visualization of 3D GIS data

- Led the development of Python codebase for real-time GIS data processing, including pipelines to standardize data (e.g., parcel boundaries, building footprints, digital elevation models) and performed custom analyses for real estate development purposes (e.g., slope, flat area, zoning envelope, buildable area)
- Implemented GIS data storage and management using PostGIS/PostgreSQL and supervised Python batch scripts to parallelize generation of proprietary GIS data at scale using docker containers and AWS virtual instances
- Co-developed proprietary zoning algorithms to generate the unique 3D max build/zoning envelope for any parcel (including non-convex polygons) and robustly performed dimensional fit of proposed new buildings using advanced computational geometry methods
- Spearheaded research of state-of-the-art neural rendering methods for photorealistic 3D real estate visualization leveraging neural radiance fields (NeRF) and structure from motion (SfM) techniques

Research Scientist | Feb 2014 - Present
IFP Energies Nouvelles, France
Project Leader for ACAI (Acceleration of Computations through Artificial Intelligence)

- Managed a team of 4 research scientists and supervised 6 PhD students and 3 Post-docs
- Developed state-of-the-art algorithms for several research projects related to the energy sector (CO_2 Storage, wind farm optimization, catalyst development for biofuels and batteries) with implementations in several HPC industrial codes
- Pioneered and developed AI–related research at IFPEN: roadmap development, project proposal review, scientific animation
- Contributed to the AI research community (organization of several conferences and workshops, Dataia program committee member)

SKILL HIGHLIGHTS

- Outstanding verbal and written communication skills demonstrated through 10+ publications in peer-reviewed journals, conference presentations, and experience teaching university classes
- Excellent scientific project management skills to coordinate a team of mathematicians, computational scientists and domain experts
- Technical skills
  - Programming languages: Python, C++, Fortran, Matlab
  - AI Frameworks: Pytorch, Tensorflow, Jax
  - Neural Rendering: Nerfstudio, Colmap, instant NGP
  - Database systems: SQL, Postgre/PostGIS, Amazon RDS
  - GIS specialist: GDAL, Fiona, rasterio, shapely, geopandas