



Daniel HIRST

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[github](#)

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SUMMARY

Resourceful and driven Python developer who is passionate about Earth observation applications. Transitioned from junior developer into principal architect of the company's flagship project. A reliable team member, have collaborated with and managed teams to establish and grow organisations from inception to release. Strong knowledge of geospatial libraries and computer vision techniques to develop solutions on the cutting edge of remote sensing.

SKILLS

PROGRAMMING LANGUAGES	Experienced: Python Familiar: SQL Javascript C HTML/CSS Bash Java MatLab
SOFTWARE DEVELOPMENT	AWS Machine Learning GIT CLI Agile Methodology Algorithms
FRAMEWORKS & LIBRARIES	Numpy Pandas Flask Scipy Tensorflow Fast.ai Keras Matplotlib Boto Open-CV Scikit-image
REMOTE SENSING	GDAL EO-Learn Google Earth Engine QGIS Rasterio Geopandas Shapely 3D Modelling Satellite Video SAR

EXPERIENCE

EARTH-I LTD.

2020-Present / Guildford, UK

DEVELOPER

- Designed, constructed, and tested large scale Python workflows for the finance and mining industries
- Created resilient cloud-based infrastructures using AWS
- Advanced from junior developer to chief technical architect of the company's flagship product in 6 months
- Used deep learning and computer vision to analyse satellite imagery and extract insights
- Engineered products using visible, infrared, and SAR imagery

CHAPEL THRILL ESCAPES

2018-2020 / Chapel Hill, NC

CO-FOUNDER AND TREASURER

- Founded an escape room company focused on creativity and sustainable employment
- Constructed the escape room, designed puzzles, devised the marketing strategy and developed the backend infrastructure to operate the business
- Pitched and acquired over \$15,000 in start-up capital

SEDS USA

2018-2019 / Remote

CHAIR

- Elected leader of the world's largest student-run space organisation, with over 5,000 students in 85 chapters across the USA
- Led a team of 30 to create scholarships, grants, competitions and support infrastructure
- Managed a budget of \$100,000 and formulated reinvestment of our \$300,000 endowment
- Organised a conference with over 430 attendees from 56 universities

SATELLITE APPLICATIONS CATAPULT

2019-Summer / Harwell, UK

SOFTWARE ENGINEERING INTERN

- Built Convolutional Neural Networks to identify illegal mining activity from satellite imagery
- Designed and constructed software to extract, transform, and load training datasets
- Used GDAL, Rasterio, and ESA SNAP to transform and subset Sentinel-2 satellite tiles

EDUCATION

UNIVERSITY OF NORTH CAROLINA

2016-2020 / Chapel Hill, NC

B.Sc. IN COMPUTER SCIENCE AND ASTROPHYSICS

- **GPA:** 3.79
- Completed courses in Geospatial Programming, Quantum Computing, Computer Vision, Web Development, Computer Architecture, Linear Algebra, Statistics, and Observational Astrophysics

BRENTWOOD SCHOOL

2009-2016 / Brentwood, UK

- **A-Levels:** Further Mathematics (A*), Mathematics (A*), Physics (A), Latin (A*)

OTHER ACHIEVEMENTS

- AWS Certified Solutions Architect - Associate (2021)
- The Mars Generation 24 Under 24 Leaders and Innovators in STEAM and Space Winner (2020)