Patrick Coser

Data Processor

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Up-to-date version of CV is available at
https://patrickpca.github.io/cv-en

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Resume

As an Oceanographer with additional training in Cyber Defense from FIAP, I have specialized in the intersection between ocean science and data technology, with a focus on the acquisition, processing, and analysis of oceanographic data through advanced methods. My experience ranges from the use of bathymetric technologies and GIS analysis to the application of precise positioning systems, such as RTK and DGPS, in hydrographic and geophysical service projects. I possess solid skills in handling environmental data, such as ADCP, CTD profiles, dissolved oxygen, as well as data on waves, currents, sea levels, and meteorology. My proficiency in Python programming, enhanced by knowledge in data analysis and cybersecurity, allows for the development of efficient routines for processing and presenting oceanographic data. Experience in cybersecurity complements my analytical capability, bringing a rigorous approach to the protection, analysis, and management of sensitive data, essential for the integrity and security of oceanographic projects.

Professional Experience

October 2023 – Now

Freelance - DataProcessor

- Qimera Operation for Bathymetric Data: Efficient use of Qimera software for processing and analyzing depth data
- Optimization with AutoClean and qimera: Application of automatic filters to enhance the quality of bathymetric data
- Data Management with EIVA: Strategies for effective management of large volumes of bathymetric data using EIVA
- Multisource Data Integration: Combining bathymetric data with other geospatial data sources for comprehensive analysis

Qimera | AutoClean | Eiva

November 2022 – Now

Mazars

- Internal and External Pentesting
- Pentesting on Web Applications
- Implementation of Security Policies following guidelines from CMN, Bacen, CVM, NIST, and ISO 27K
- Monitoring, auditing, and assessing the maturity of information security processes
- Analysis and mitigation of risks and vulnerabilities in cyber security systems, applications, processes, and infrastructures.
- Automate internal processes, creating interactive dashboards and web systems

Pentest | Audit | Vulnerability Assessment

April 2018 – July 2021

EGS Brasil

Data processing with Python and the development of technical reports for clients, incorporating automated methods for document creation using the language. Utilized libraries include Numpy, Pandas, Matplotlib, Cartopy, Seaborn, gsw, pylab, and pycircstat. Maintenance, testing, and development of procedures for oceanographic electronic equipment such as SBES, ADCP, CTD and HOBO. Data acquisition via watercraft, conducting surveys, and installing tide gauges.

Data Analysis | Python | Geoprocessing

February 2016 – December 2016

Ecoceano - Junior Consulting Company in Oceanography and Environmental Education

Managing cash flow, preparing informative reports, conducting strategic planning, and supervising advisors in the distribution of tasks.

Environmental Education | Cash Control | Accounting

Education

- Cyber Defense - Faculty of Informatics and Administration Paulista - FIAP [2022]
- Bachelor's in Oceanography - Federal University of Espírito Santo - UFES [2018]

Experience

December 2016 - Now

Data Processor

Data analysis; Data qualification; Creation of data processing workflows; Automation of data processing.

Anaconda | Github | Python | PHP | Matlab | ArcGis | Qgis | Autocad | Hypack | Qimera

January 2021 - Now

Cyber Security

Internal and External Pentesting; Web application pentest; Vulnerability analysis.

Linux | Python | SQL | C | Ruby | Power Shell | Bash | Nmap | Nessus | Shodan | GitLab | GitHub | AWS | Azure

Team Work ●●●●	Flexibity ●●●●	Data Analysis ●●●●	Linux ●●●●	Python ●●●●	Qimera ●●●●
FMGeocoder ●●●●	ArcGis ●●●●	QGis ●●●●	Hypack ●●●●	GlobalMapper ●●●●	AutoCad ●●●●
EIVA ●●●●	CARIS ●●●●				

Projects

GEOxyz - Online Data Processor - Abril 2024 - May 2024)

- Bathymetric Data Processing by Geo Ocean 3 in Sunderland, UK: Efficient handling of depth data collected off the coast of Sun
- Data Acquisition with SSS, SBP, and Multibeam: Strategies for capturing underwater data using Side Scan Sonar (SSS), Sub-bottom Profiling (SBP), and Multibeam systems.
- Daily Deliverables Export for QC: Routine export of daily acquired lines for quality control assessments.

Qimera | AutoClean | FMGeocoder | QGis | Python | Excel

Shore Approach - Petrobras (Jul 2019 - Mar 2021)

- Coastal monitoring Jaconé (RJ), Cabiúnas (RJ), Barra do Riacho (ES) e Regência (ES).
- Monthly campaigns with data acquisition of beach profiles with SBES and RTK, Quality control, and technical report.
- Tide gauge installation. Mooring and retrieval of ADCP and CTD with deployment in a Sonardyne LRT.
- Sidescan sonar data acquisition.

Github Python PHP Matlab ArcGis Qgis Autocad Hypack HOBOware Global Mapper Edgetech Discover SignatureWaves Echart Ruskin SeatermV2

Programa Amazônia Integrada Sustentável (PAIS) - Rede Nacional de Ensino e Pesquisa (RNP) (May - jun 2021)

- Conducting a pre-laying cable route survey along the Amazon River, this project incorporates bathymetric and sonographic mapp seismic data acquisition, and the collection of environmental, sedimentological, and topographical data. It utilizes Bathyswath - Processor and Global Mapper software for comprehensive analysis and mapping.

Python SeatermV2 Ruskin ITER SYSTEMS BathySwath echosounder SBG SYSTEMS Ellipse 2 MRU Teledyne DMS-05 MRU

Pre cable lay route survey (Oct 2021)

- The project, undertaken for the client Ellalink, is executed with the advanced CARIS HIPS and SIPS software, focusing on onshore activities in Fortaleza, Brazil. This project utilizes the state-of-the-art MBES R2Sonic2024 single head instrument to ensure precise mapping and surveying outcomes.

MBES R2Sonic2024 single head Valeport CTD Python

Centrais Eletricas de Sergipe (Nov 2020 - Mar 2021)

- The Coast Morphodynamics Monitoring Program, commissioned by CELSE – Centrais Elétricas de Sergipe S.A., utilizes advanced so tools like Bathyswath Processor and QGIS for onshore operations in Sergipe, Brazil. The project employs cutting-edge instrument including the ITER SYSTEMS BathySwath echosounder, SWiFT Valeport CTD, SBG SYSTEMS Ellipse 2 MRU, and Teledyne DMS-05 MRU, to ensure precise and efficient monitoring of coastal dynamics.

BathSwatch Echosounder Valeport CTD SBG System MRU Teledyne DMS-05 MRU

Alcatel Submarine Network - ASN (Apr - jun 2019)

- Cable route survey in Rio de Janeiro and Santos - Brasil. Mobilization of vessels, side scan sonar, SBES and RTK, data acquis and quality control.

Hypack Echart Scanline HOBOware Geosuite Acquisiton Edgetech Discover Sonardyne Ranger Valeport Datalog Sonarwiz Qinsy Qimera

Shore Approach - Petrobras (Out - Dec 2018)

- Coastline surveillance in Guamaré - Brasil involves monthly operations utilizing Single Beam Echo Sounders (SBES) and Real-Time Kinematic (RTK) systems for beach profile data collection and quality control. This includes the installation of tide deployment and retrieval of Acoustic Doppler Current Profilers (ADCP). Additionally, data is acquired using side-scan sonar technology.

Hypack Echart Scanline HOBOware Global Mapper Edgetech Discover Nortek Aquadopp SIG500