

Earth observation scientist

Pinkmatter is a software development company looking for new talent in Pretoria (Far East) to work in the exciting world of satellite imaging. We build cutting-edge Earth observation software used across the globe.

Role

This role forms part of the software engineering team responsible for the research and development of image-processing software and products.

Requirements

- Bachelor's degree in science
- Strong mathematics background
- Strong data science background
- Remote sensing / GIS experience
- Scripting or programming experience
- This is a fully office-based position

Responsibilities

Research and development

- Research and develop cutting-edge techniques and algorithms to process and analyse Earth observation data
- Develop a deep understanding of the steps and processes required to calibrate and validate optical EO satellite sensors
- Design and develop processors and processing chains to perform data decoding, calibration, image pre-processing, and image correction

- Work with data ranging from raw satellite data, optical imagery, and SAR data to real-time telemetry received by ground stations
- Devise and implement novel techniques to create and analyse both low-level and high-level imagery products
- Be creative in solving complex problems using mathematical and statistical approaches, systematic modelling, pixel-based analysis, and machine learning
- Stay up to date with new technologies, approaches, and advances in your field
- From time to time, attend conferences and co-author papers

Application and design

- Document techniques, algorithms, and processes in a clear and organised way
- Create proof of concepts to illustrate methods in question
- Gather statistics and create reports to validate accuracy of proposed methods
- Work together with your tech lead to plan milestones, create task breakdowns, and prioritise activities
- Mentor junior team members

Quality assurance

- Improve, optimise, and validate techniques, chains, and processors
- Devise and perform validation procedures to determine the accuracy, consistency, and performance of processors and products
- Design test scenarios and ensure that Pinkmatter's products are of high quality
- Analyse data, quality check image products, and write professional reports

You will need to be:

- Excited about technology and areas such as:
 - Image processing and computer vision
 - Satellites, sensors, and optics
 - Remote sensing
 - Optical, hyperspectral, and SAR imagery
 - Radiometry and geometry
 - Statistical and mathematical models
- Passionate about developing algorithms
- Analytical, critical thinker, and creative problem solver
- Comfortable working in a methodical and detailed manner
- Willing to work in a fully office-based environment in the Far East of Pretoria