

Data Science & Computer Vision Specialist

At **ColorSensing**, we are developing a smart label to fight food waste. We create smart packaging solutions that integrate patented algorithms to generate QR codes with color patterns and sensing inks that react to physical environmental conditions. Through precise color readings of the sensor, we optimize real-time product monitoring and improve food safety and quality.

As a **Data Science and Computer Vision Specialist** at ColorSensing, you will be responsible for leading and supervising image processing, with a particular focus on the development and implementation of color correction and computer vision solutions. You will work closely with the software, chemical engineering, and industrial printing teams to identify opportunities, design, and execute solutions that improve our product's efficiency.

Key Responsibilities

- **Lead the design, development, and optimization** of color correction and computer vision algorithms, as well as the training of predictive models to model the sensing ink behavior.
- **Interpret prediction model results**, linking data metrics with the physicochemical behavior of sensors to diagnose anomalies and propose improvements.
- **Develop and maintain robust and scalable data pipelines** for the automated processing of laboratory assays and pilot tests.
- **Act as a technical point of contact** for external printing houses, supervising color management in CMYK systems and ensuring chromatic reproduction fidelity in industrial processes.
- **Collaborate closely with software and chemistry** teams to ensure the technical alignment of solutions with product requirements.
- **Guide the technical growth of junior profiles** and communicate complex findings clearly to both technical and non-technical stakeholders.

Location

This opportunity is available for professionals located in Spain, with a preference for candidates in the Barcelona area. The position is hybrid, combining on-site days at the ColorSensing offices with remote workdays. Our offices are located at StartUB (Carrer de Pascual i Vila, Les Corts, 08028 Barcelona), just a few meters from the Faculty of Physics and Chemistry at the University of Barcelona, where the company has laboratory space for the development, synthesis, and characterization of sensing inks.

Technical Requirements

- **Education:** Degree or Master's in Physics, Engineering, Computer Science or Mathematics.
- **Experience:** 3+ years as a Data Scientist with a proven ability for exploratory analysis and complex problem-solving.
- **Programming:** 4+ years of experience with Python in the scientific ecosystem (NumPy, SciPy, scikit-learn, Matplotlib, pandas, etc.).
- **Computer Vision:** Solid experience in image processing with OpenCV. Familiarity with Deep Learning frameworks (PyTorch, TensorFlow, or Keras) applied to segmentation or classification tasks.
- **Color Science & Management:** Deep knowledge of the physics of color and main color spaces (CIE Lab, XYZ, HSV, CMYK, RGB).
- **Code Quality & Testing:** Commitment for ensuring code quality through exhaustive testing, from unit tests with pytest to simulating complex scenarios with mockups.
- **Version Control:** Proficiency in Git for collaborative development (merges, branching, and conflict resolution).
- **Communication:** Ability to work in multidisciplinary teams and communicate ideas clearly and effectively.

Desirable Extras

- **QR Code Handling:** Experience generating and decoding QR codes using tools like zbar or OpenCV in Python.
- **Model Deployment:** Experience transitioning ML/DL models from development to production environments, focusing on stability, monitoring, and performance.
- **Docker:** Basic knowledge of containerization and application deployment.
- **Cloud:** Familiarity with basic cloud services such as GCP or AWS.
- **Industrial Color Management:** Experience with ICC color profiles and their integration into industrial printing processes.

What We Offer

- The opportunity to work in a growing tech startup with an innovative team.
- Direct impact on the final product, contributing ideas that directly influence the solution.
- A dynamic and collaborative environment with a focus on professional and personal growth.

If you're interested please send your resume at hr@color-sensing.com