

# Julian Arts

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Brabant, Netherlands



## PYTHON DEVELOPER

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Innovative Bioinformatics PhD Candidate with expertise in Python automation and machine learning. Proven ability in developing Python packages, DevOps and MLOps pipelines. Capable of leading data-driven projects and contributing to interdisciplinary research. Seeking to leverage automation skills in a Python developer role.

### EXPERTISE & SKILLS

IaC (Terraform)	ML (sklearn & PyTorch)	MLOps (MLflow & DagsHub)
Collaboration	Data Analysis (Python & R)	DevOps (GitHub actions)
Supervision	Containers (Docker & Rancher)	Cloud (Azure)

### NOTABLE ACHIEVEMENTS

- Authored peer-reviewed papers in journals on topics: software development, machine learning and the cornea.
- Oral, poster presentations and demos at both national and international conferences, such as Bioinformatics and Systems biology (BioSB) and CSHL Biological Data Science.

## PROFESSIONAL EXPERIENCE

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### Radboud Insitute of Molecular Life Sciences

Radboud University (2021-2025)

*Python developer (automation & ML engineering)*

Engaged in Python software development and the Bioinformatics analysis of data related to the cornea. Contributed and managed international projects, leading to innovative research and functional applications in Bioinformatics.

- **Scalable AI:** Developed scTuner, an AI-based data integration and fine-tuning platform. Through GPU-accelerated data processing, model training is up to 5x faster using equivalent resources compared to state-of-the-art (scVI).
- **Machine learning engineering:** Constructed the MLOps pipeline cPredictor capable of classifying 100.000 corneal single-cells directly from the CLI under 2 minutes on standard hardware (4 core CPU, 8GB RAM) [paper][Docker].
- **Application development:** Engineered AnanseScanpy, the Python equivalent of the single cell ANANSE pipeline, capable of multi-modal dataset integration [paper].
- **Clustering optimization:** Collaborated on Opticlust, a software package that enables faster clustering decisions in unstructured data.

### Hubrecht Institute

Utrecht University (2019-2021)

*Research intern*

## EDUCATION

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### BSc. Biology

Utrecht University

### MSc. Molecular & Cellular Life Sciences

Bioinformatics profile

Utrecht University