

IDP: Deep Learning to save Europe's forests @ClimateTech Startup Pina

Quick facts

Name	Tags
Location	Munich Remote
Start	ASAP Summer Term Winter Term
Employment Type	IDP
Area	Data Science Machine Learning
TUM Chair	Technology and Innovation Management (Prof. Henkel)

Our Mission



Pina's mission is to protect our forests by quantifying and rewarding sustainable forestry.

Why we do what we do

European forests are dying due to the consequences of climate change, namely droughts, storms, and beetle infestations. A potential way of fighting this is to adopt more **sustainable forest management** practices, however these can be very costly.

But there is a way to financially reward forest owners for their adapted management measures: They can sell the carbon stored through their measures via the **voluntary carbon market**. To facilitate this, forest owners need to know how much carbon is stored in their forests now and how **carbon stocks** change over time. However, tracking carbon stocks and getting certified for the sale of carbon credits is expensive, lengthy, and requires expert guidance.

This is where Pina comes in: We aim to **digitalize** the manual process of **forest certification**. We replace manual project documents with intuitive software and use **remote sensing technology** (drone and satellite data) to accurately measure and monitor forest carbon stocks. This reduces complexity and costs and makes the voluntary carbon market **accessible to more forest owners**.

About the opportunity

We're currently running our first pilot projects to gather data (manual measurements, LiDAR- and satellite data). Afterwards, it's your turn. Here is a short overview of what we're trying to achieve together with you:

- Train classification and regression models with satellite images and LiDAR data to assess forest biodiversity and biomass
- Test, benchmark, and optimize AI performance
- Implement 3D segmentation algorithms for LiDAR point cloud data
- Build a data- and analytics-pipeline to enable future automation of this job

👉 What you should bring

- Solid knowledge of programming in Python/C++
- Experience with Deep Learning frameworks such as TensorFlow, Pytorch, or Keras (3D/point cloud data is a plus)
- Love team-work, pair-programming, and curiosity for the new
- Comfortable with taking ownership

😎 How we'll work together

- Work hand in hand with experienced developers
- Work in an agile environment at an award-winning startup
- Apply your knowledge to the real world and see your impact first hand
- Shape the future of Pina together with us

👋 Who we are

We - Flo, Gesa, and Jonas - are a young, tech-first, and mission-driven team of engineers, growth managers, designers, and researchers who studied at CDTM, LMU, TUM, and UC Berkeley and worked in high-growth startups, sustainability & management consulting, as well as academia. We recently joined forces to tackle one of the most pressing issues the world is facing today: **Climate change and its impact on European forests.**



Gesa Biermann

Business

M.Sc. Sustainability Science

Prev. CDTM Mgmt Team, Co-Founder
180 Degrees Consulting Munich



Florian Fincke

Product

M.Sc. HCI

Prev. Lead Fullstack Developer
(ORDA, Alasco), CDTM Alumnus



Jonas Kerber

Tech

M.Sc. Robotics & AI

Prev. Automated Driving (BMW
Mountain View), CDTM Alumnus

🚶 Why us?



Join a young tech startup
combating one of THE
problems of our time:
Climate change



Join a team of **passionate
entrepreneurs** and work
with us in a fun, flexible,
and dynamic environment



Seize the opportunity to
become one of Pina's **key
full-time employees** after
your studies

👉 Reach out

Sounds like we're a good fit? Drop us some lines along with your **CV**: team@getpina.com