

Scientific cofounder

Detector physics and experimental validation

Berlin | Early-stage venture

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I'm Hardip Bhesaniya, founder of HBF Network in Berlin. I'm building AlphaTrack, software intended to help researchers analyse and review microscope images of CR-39 charged-particle detectors.

The prototype segments images using basic threshold methods, counts candidate features, measures their shape and exports results. Its accuracy on representative laboratory images still needs to be tested. I'm looking for a scientific cofounder to lead that work.

The work we would do together

You would take responsibility for the experimental and detector side:

- Obtain suitable image datasets with permission and document how the samples were prepared and imaged.
- Agree annotation rules with researchers, including how to record ambiguous features.
- Establish a fixed benchmark with expert annotations and compare AlphaTrack with manual review and suitable existing tools.
- Investigate missed features, false detections, overlaps and debris; turn the findings into software requirements.
- Work with a prospective pilot laboratory to assess whether the workflow fits its research practice.

I would continue leading software development. We would make product and validation decisions together.

What the first phase should establish

The proposed twelve-month phase should produce a documented benchmark and an evaluated workflow: evidence of what the software can do, where it needs improvement and whether researchers find it useful. This would guide development and a credible funding proposal.

Who I'd like to meet

Someone with hands-on experience in experimental physics, radiation detection, detector instrumentation or a related field. Familiarity with CR-39, microscopy, calibration or scientific image analysis would be valuable. I am interested in practical experience and careful experimental judgement.

Cofounder arrangements

HBF Network has not yet been incorporated, and I am currently the sole founder. Funding is not yet secured. We would agree responsibilities, time commitment, equity, compensation and working arrangements together.