COMPILATION TRACK LEAD

We are looking for a Track Lead to design and implement a brand new track on the topic of Compilation in our advanced curriculum. You will be responsible for developing this track from scratch; outlining the learning path, writing the projects and developing the required tools. This is a one-off mission to design and implement educational content to introduce our students to different compiling techniques.

We are looking for someone graduated in computer science, knowledgeable and skilled in compilation and language theory, and experienced with creating a real compiler in a work or study context. Someone that is excited by transferring their knowledge to young and ambitious students, and wants to contribute to our mission to make a change.

Member of the 42 Network, Codam Coding College is the only peer-to-peer software engineering institution in the Netherlands, with a world-class curriculum empowering the next leading generation of tech talent. Through our educational model, students are trained to become qualified software engineers and design inclusive solutions for the challenges of today and tomorrow!

What you will be doing
- Designing the Compilation Track including an introduction, minor and major stage, introducing students from the lexing and parsing steps, and all the way down to assembly generation.
    - Making sure that the content and methodology is in line with the philosophy and educational model of the 42Network.
    - Creating accessible and comprehensive content. Students starting this track will have a technical level comparable to Computer Science bachelor students.

- Writing several projects that together constitute the Compilation Track. Each project must include at least:
    - A pdf subject (from a LaTeX source)
    - Evaluation scale (yaml description)
    - A reference implementation (in Ocaml or Haskell)
    - An introduction video (video equipment and staff available at Codam)

- Implementing the projects in the advanced curriculum, and preparing all and any accompanying documentation for the implementation and maintenance.

What makes us happy
- Passionate about empowering the next generation of tech talents
- Graduated computer science. A PhD in computer science is a plus
- Experienced with working with compiling techniques, in a work or educational setting
- Good knowledge of functional programming with OCaml or Haskell is necessary.
- Familiar with the following techniques and concepts: formal grammars, lexing and parsing tools (similar to ocamllex/menhir, or lex/yacc for C), abstract syntax tree, typing, lambda calculus, operational semantics, intermediate languages, interpreters, functional and object oriented paradigms, instructions selection, registers allocation, assembly generation, LLVM compiler infrastructure, etc.
- Open-minded, curious, and eager to work in an innovative educational context
- Proficient in English

What we offer you
- Possibility to make a real difference in an impactful organisation
- One-off mission 6 to 12 months
- Full time or part time. Minimum of 3 days a week
- Freelancing is an option
- Competitive remuneration, depending on experience
- Working in the heart of Amsterdam, on a state-of-the-art campus or remote

Next steps
- This job offer is posted on 5th of July 2021, and is still open.
- If you recognize yourself in this description, apply here: https://codam.homerun.co/compilation-track-lead
- If you have questions, feel free to email us at jobs@codam.nl