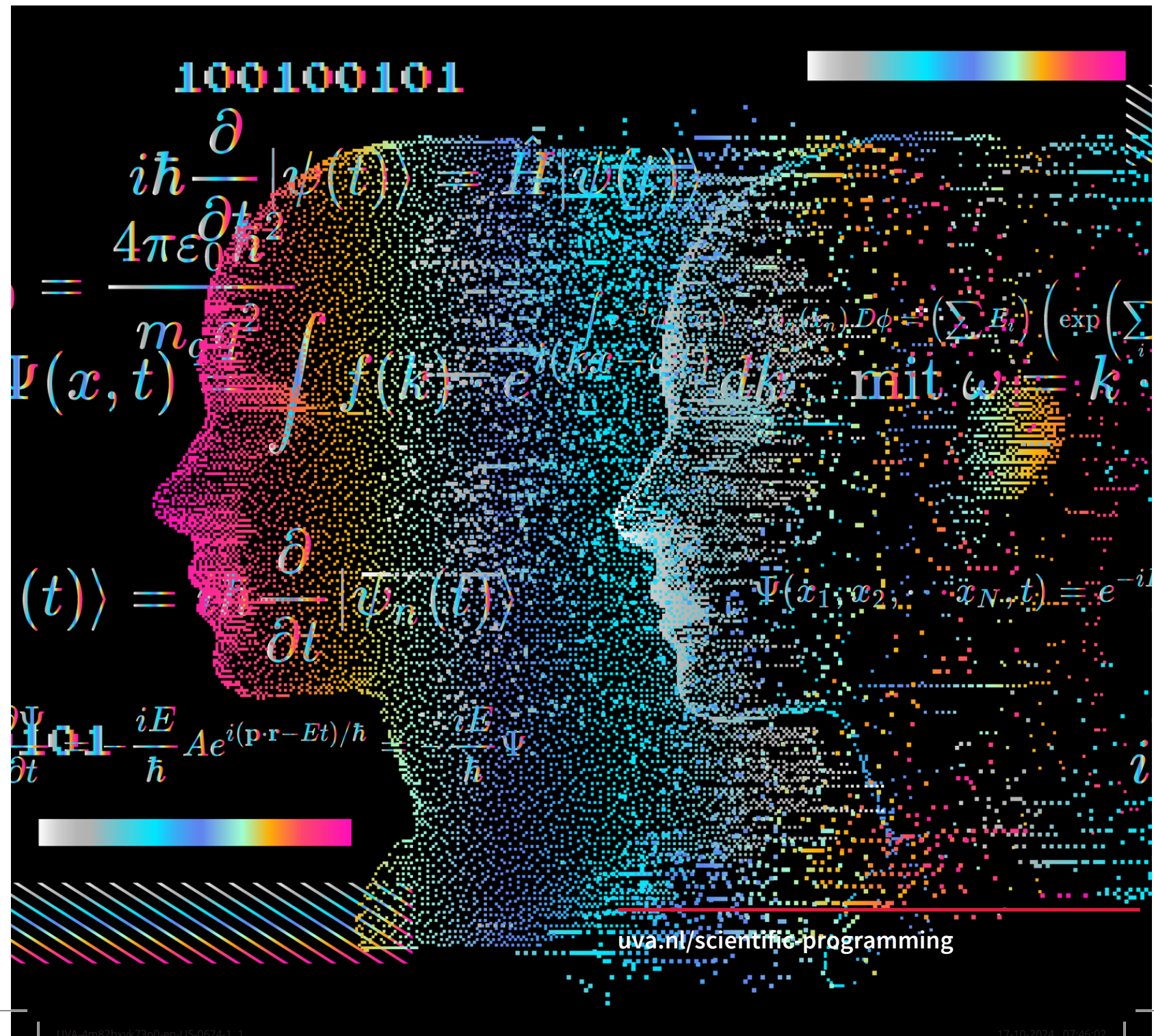**Course**

Scientific Programming 2

uva.nl/scientific-programming

Do you have a basic understanding of Python and do you want to take it to the next level? In this course you will learn how to use Python more effectively, which will simplify your life as a programmer and enable you to create efficient algorithms.

During this course you will you explore various ways Python can help you solve more challenging problems. You will gain skills to analyze large datasets and conduct complex simulations and you will learn about built-in Python features and add-ons.

After completing this course:
- You can use all basic data structures offered by Python.
- You know how you can write efficient algorithms.
- You know how to read, process, and write data large datasets using the Pandas library.
- You know how to visualize data using Seaborn.
- You can find new libraries and are able to learn to use these by studying the documentation.

Flexible design of the course:
- The course consists of three modules and concludes with a final exam on-site.
- The course is primarily online and self-study, but also offers weekly on-site tutorials.
- The on-site tutorials (at the Science Park campus) are there to help you with your assignments. They are not mandatory but we highly recommend attending the tutorials.
- We encourage you to complete the course within 7 weeks (time investment of about 11 hours per week).

For whom?
This course is designed for those who already have some programming experience and would like to further develop their programming skills. This course is initially intended for those who have completed Scientific Programming 1 and wish to delve deeper; but if you haven't, you can check out the self-assessment on our website to assess if you're ready for this course.

Introduction course: Scientific Programming 1
Are you new to Python? In that case, our course Scientific Programming 1 might be more relevant for you. See our website for more information.

Practical information:
- **Next start dates**: 6 February 2025 & 2 October 2025
- **Duration:** 7 weeks
- **Investment:** 80 hours in total
- **Mode of study:** self-study, online, on-site tutorials (optional but strongly recommended)
- **Language:** English
- **Tuition:** € 1.000,- (including all study materials, exam and guidance). If you also sign up for Scientific Programming 1, the fee for both courses will be € 2.000,- in total. UvA Alumni get a 10% discount.
- **Certificate:** after successfully completing the course, you will receive a certificate of the University of Amsterdam.
- **Location (kick-off day, tutorials, exam):** Science Park campus, University of Amsterdam

Sign up:
To sign up for the course, please go to our website: uva.nl/scientific-programming

Questions?
If you have any questions, please contact us by sending an e-mail to: *professionaleducation-ivi@uva.nl*

You can find more information about this course at: uva.nl/scientific-programming