



PI SCHOOL

# School of Artificial Intelligence

Enter the world of AI through the front door



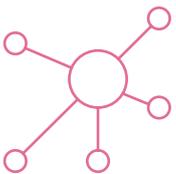
# School of Artificial Intelligence

Become an AI expert through our hands-on mentoring programme, working on real industry projects.



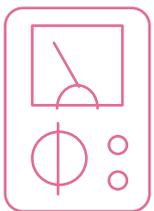
## Enter the world of AI through the front door

- ✓ join the game and become a player in the world of AI
- ✓ learn to think like an AI insider
- ✓ develop your own judgement on AI trends



## Engage with thought leaders from top industry and research groups

- ✓ network with established AI professionals
- ✓ understand the AI industry through first-hand accounts
- ✓ hear insider anecdotes and stories during fireside chats



## Get expert advice on your own project

- ✓ accelerate your project
- ✓ get pointers on the up-to-date techniques you need
- ✓ make it to the top of the pack by overcoming your technical hurdles



## Gain expertise

- ✓ build up a base of future-proof essentials
- ✓ develop an area of expertise based on your interests
- ✓ learn how to drive your project autonomously after leaving Pi School

# Want to be part of it?

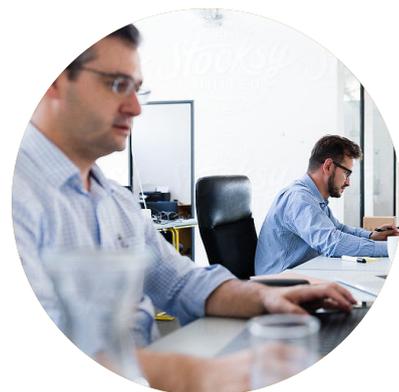


## Apply as a candidate

Are you a student or AI enthusiast? Apply for one of our **fully-sponsored places** and give your career in AI a boost. Or if you're employed, convince your company that training in machine learning and AI is the best investment they can make these days. You'll be **mentored** by some of the finest minds around, representing institutions such as Cambridge, Google, Facebook, Amazon, Carnegie Mellon and more. All while gaining hands-on AI and machine learning experience and specialist skills by working on your sponsor company's industry project.

## Train your staff

Unlock the potential of machine learning for your **business projects** and train your engineers at the same time. Work with our Director to develop your project into a specific machine learning concept with **clearly defined deliverables**. Maximise the value of your training by opting for a programme based on **mentoring and individual** sessions. **We guarantee that the intellectual property rights and confidentiality** of your data and results will be protected.



## Become a partner

Associate **your brand** with the cutting edge of AI. Sponsor scholarships for bright students taking part in our hands-on AI training course. **Create** your own data science or AI challenge for the trainees you sponsor to work on. Name a recipient for your scholarship, or let us find and select the most deserving. All our supporters are featured in **Pi School's online and offline communication** and invited to our networking events.



# Schedule



## Before

Are you an enterprise? We will take some time to scope out your AI project together



## Weeks 1-2

Programme induction and “Essentials” lectures



## Weeks 3-8

Project work, personalised training, tutoring and mentoring, group activities



## Week 8

Project presentations and final event



## After

Recruitment opportunities with our partners. Alumni events at Pi Campus.

## Next course

### START DATE

15-10-2017

### APPLICATION DEADLINE

10-09-2017

### DURATION

8 weeks (full time)

### TARGET AUDIENCE

Skilled developers with little to no AI experience

### FEES

€15,000  
15 full scholarships available

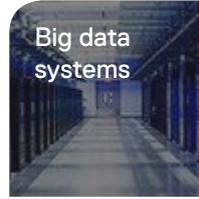
### LOCATION

Pi Campus, Rome

# Areas we cover



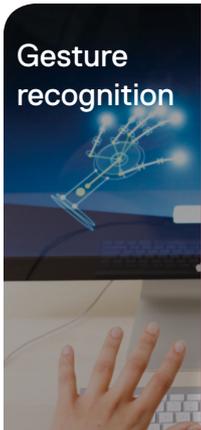
Deep learning



Big data systems



Speech, sound, image and video processing



Gesture recognition

Recommendation systems



Text and document processing

Time series

Data collection and generation



# Sample projects

Active learning and CNNs to minimise the annotations needed from human aerial cartography annotators

LSTM architecture for information extraction applied to forum posts

Random forest regression to predict the success of movie production

Contextual bandit optimisation scheme to match translation job requests with the best translator for the job

# Our method

---

We favour individual mentoring and inverted classrooms over classic instructor-led courses, and real-world project work over generic exercises.

This approach delivers the maximum added value to the student. We are able to offer this approach because our mentors have the top-level expertise that it requires.

# Mentoring sessions

---

During these sessions, trainees and mentors review the results obtained so far: plots, diagrams, source code, etc. An in-depth discussion takes place in which the details are analysed and examined in the context of the bigger picture. The trainee receives specific, personalised advice.

## **Training-related advice could consist of**

- recommending the most useful MOOCs, tutorials, documentation and scientific papers at this point in the trainee's learning journey
- discussing the most difficult points and reviewing the required maths or statistics
- framing a technique within its wider context in order to grasp connections and potential improvements

## **Project-based advice could include**

- analysing performance results
- recommending algorithms or libraries
- discussing applicable algorithms, data sources and new features
- devising experiments or tests to run
- planning future work and setting short- and long-term goals



# Programme Director

---

The Programme Director will be available at all times to: define your strategy, recommend resources, fill knowledge gaps, help when you get stuck and challenge you when you're low on energy!



**Sébastien Bratières**

Director of AI, Translated



Sébastien has over 15 years of experience in the AI industry, covering topics ranging from **speech interfaces and chatbots to data science**. He has taught both **professionals and students** at institutions including École Centrale Paris and LUISS Business School in Rome, and consistently receives glowing reviews from his pupils. He carried out his PhD in **probabilistic machine learning** at the University of Cambridge, home to one of the world's **leading research labs**. Sébastien is a regular speaker at international events dealing with machine intelligence.

## Mentors

---

Our mentors are AI engineers from the industry's finest labs.

Alongside the Programme Director, they will coach the students on a weekly basis.



**Lukasz Kaiser**

Researcher, Google Brain



Lukasz's research focuses on **deep learning** applied to natural language processing, and he has recently been working on the use of **attention models and transfer learning**. Lukasz is a key contributor to Tensor2Tensor, an open-source **TensorFlow** library containing implementations of several state-of-the-art neural models. He earned a PhD from RWTH Aachen in 2008 and Master's degrees in mathematics and computer science from the University of Wroclaw in 2003.

In 2013, Adam co-founded Skymind, the startup which produces the open-source **Java deep learning framework** Deeplearning4j and ND4J (n-dimensional arrays). A year later, he left his computer science studies at Michigan Technological University to work on Skymind full-time, raising money from **Y Combinator and Pi Campus**. Adam wrote "Deep Learning: A Practitioner's Approach", published by O'Reilly in August 2017, and he also is an advisor to the data science master's program at GalvanizeU in San Francisco.



**Adam Gibson**

Founder & CTO



**George Tall**

Co-founder & CTO



George founded Ivl5 (precision maps for **self-driving cars**) with ex-Tesla engineers Andrew Kouri and Erik Reed while he was studying towards his MS in computer science at Georgia Tech. Before this, he was on **iRobot's** Advanced Development group where he worked on **monocular-visual and volumetric SLAM algorithms**. George received a BS in mechanical engineering (with a concentration in computer science) from Northwestern University in 2013.

# Advisory Board

---

Our advisory board is here to make sure that every single project is based on bleeding edge technology. Simply put, they make sure there's no better way to do it.



**Alex Waibel**

Professor of Computer Science

**Carnegie Mellon University**

A pioneer in neural network speech recognition, Alex invented **time-delay networks** in 1989 as part of his PhD at **CMU**, having previously graduated from **MIT** with a BSc in 1979. In addition to his academic career, he has co-founded 10 successful commercial ventures. One of these, Jibbiggo, was **acquired by Facebook** in 2013, leading Alex to found Facebook's Language Technologies group. He has received more prizes and distinctions than we have space to list here, and is a fellow of the IEEE and a member of the German Academy of Sciences.

After completing his PhD at RWTH Aachen, Hassan started off as a researcher, but quickly branched out and set up a **speech-to-speech translation** company. He has served as a CEO or Chief Scientist for several ventures in the speech recognition industry. He joined **eBay** in 2013 and became Head of AI before leaving to head up **Amazon's AI efforts. He is now Director of AI at AWS.** Hassan serves as a board member and advisor for a number of AI companies which he helped to found, including Witlingo and Gyant. Hassan also makes angel investments through Keiretsu.



**Hassan Sawaf**

Director of AI, AWS



**Marcello Federico**

Head, Human Language  
Translation Unit



A **pioneer in the field of machine translation**, Marcello's research focuses on methods to integrate human and automated translation. Marcello is the **co-founder and scientific advisor** of MateCat and ModernMT, a project which aims to deliver real-time domain-adaptive **neural machine translation**. Marcello has co-authored over 180 scientific publications on machine translation, language modelling, speech recognition and information retrieval. He has been a committee member at all the major international industry conferences and is also a senior member of the IEEE and the ACM. Marcello graduated "summa cum laude" from the University of Milan in 1989.

## More to be announced

---

We're currently in touch with several more machine learning scientists and practitioners who would like to mentor our students. Stay tuned

# About Pi School

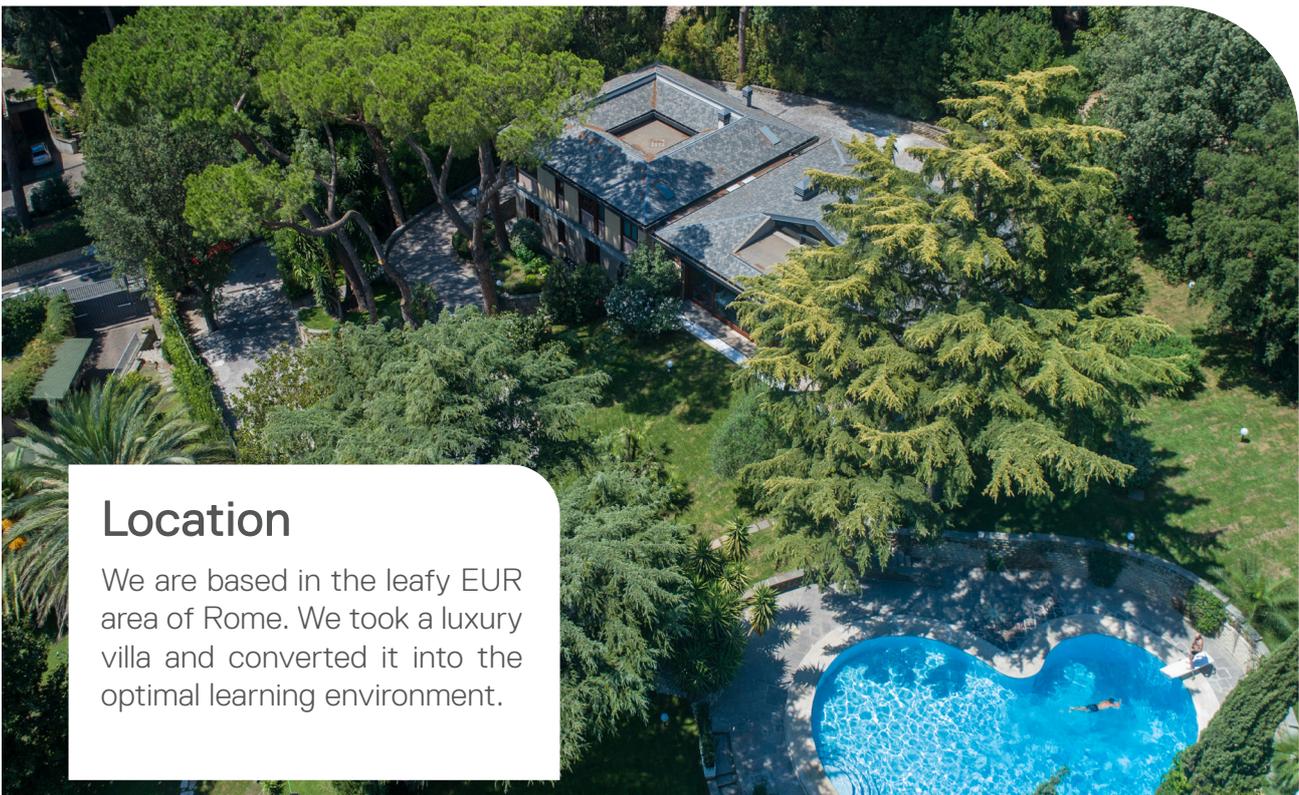
---

Pi School is part of Pi Campus, which is located in Rome, Italy.

Pi Campus is both a venture capital fund and a startup district; it invests in growth-stage startups, with 28 investments in Italy and worldwide, and hosts some of them. Pi Campus was co-founded in 2007 by Marco Trombetti, a serial entrepreneur and angel investor, based on the commercial success of his first venture, Translated, an online translation platform which he co-founded in 1999.

Pi School offers professional education programmes and bespoke courses in its two specialist areas, which are also the cornerstones of Pi Campus: innovation, creativity and design alongside AI and machine learning.

Pi School is led by Jamshid Alamuti, an expert on innovation and leadership, but above all a transformer and people development expert. Jamshid formerly transformed and led the Berlin School of Creative Leadership and designed and ran many other educational institutions in Europe, where he developed EMBA units and C-level programmes. In between, Jamshid has always been an independent leadership consultant, speaker and writer in order to keep the balance between theory and practice. He co-founded Pi School with Marco Trombetti in 2016.



## Location

We are based in the leafy EUR area of Rome. We took a luxury villa and converted it into the optimal learning environment.

# Other useful info

## Requirements

We run the programme in English, so you must be able to work in English.

You must have a formal STEM background in a quantitative discipline (yes, machine learning uses maths!). You must know how to code, preferably in Python, which is the de facto standard programming language for AI and data science.

We have no specific requirements about your knowledge of machine learning or AI, but obviously it won't hurt if you have some prior exposure, through a MOOC, a workshop or an individual project. Because our training is totally personalised, the further along you are already, the further we'll take you.

## Grant selection process

If you're a great developer, our partners are interested in sponsoring you. We will award grants following a selection process based on a CV, a 300-word cover letter, and two technical video interviews lasting an hour each (focusing on engineering skills rather than AI).

## Do I have to stay on-site for the entire 8 weeks?

We recommend that you stay for the whole 8-week programme to reap the maximum benefit, not just from the lectures and mentoring sessions, but also from informal networking and exchanges around Pi Campus.

Under special circumstances (e.g. family or professional reasons), you may attend part of the programme remotely, except for the first 2 weeks, for which you must be on-site.

If financial reasons (e.g. accommodation and maintenance) would prevent you from attending, please contact us, as we have maintenance grants available.

## What is included?

- access to lectures and presentations
- teaching materials, lecture videos, Jupyter notebooks
- 1-to-1 mentoring sessions
- a desk at Pi School for the duration of the programme, complete with 27" Apple monitor
- AWS and Azure computing infrastructure for compute-intensive jobs
- additional Pi Campus events: tech talks, evenings with entrepreneurs and influencers
- Pi Campus perks: spinning, yoga, tai chi, gym, swimming pool and sauna
- snacks and lunches delivered from a nearby restaurant on weekdays

## What do I need to organise?

- a laptop
- travel to Rome and Pi School
- accommodation
- plenty of free time to study and work

# School of Artificial Intelligence - Next Course

## START DATE

15-10-2017

## DURATION

8 weeks

## LOCATION

Pi Campus, Rome

## TARGET AUDIENCE

Skilled developers with little to no AI experience

## Need more info?

---

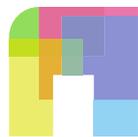


Wish to join the programme as an enterprise?

Ask our Programme Director: [sebastien@picampus-school.com](mailto:sebastien@picampus-school.com)

Visit our website: [picampus-school.com/programme/school-of-ai](http://picampus-school.com/programme/school-of-ai)

Apply as a candidate: [pischool.link/apply-now](http://pischool.link/apply-now)



# PI SCHOOL

Via Indonesia 23 - 00144 - Rome

[www.picampus-school.com](http://www.picampus-school.com)

[info@picampus-school.com](mailto:info@picampus-school.com)