

Data Practitioner's Fellowship 2022

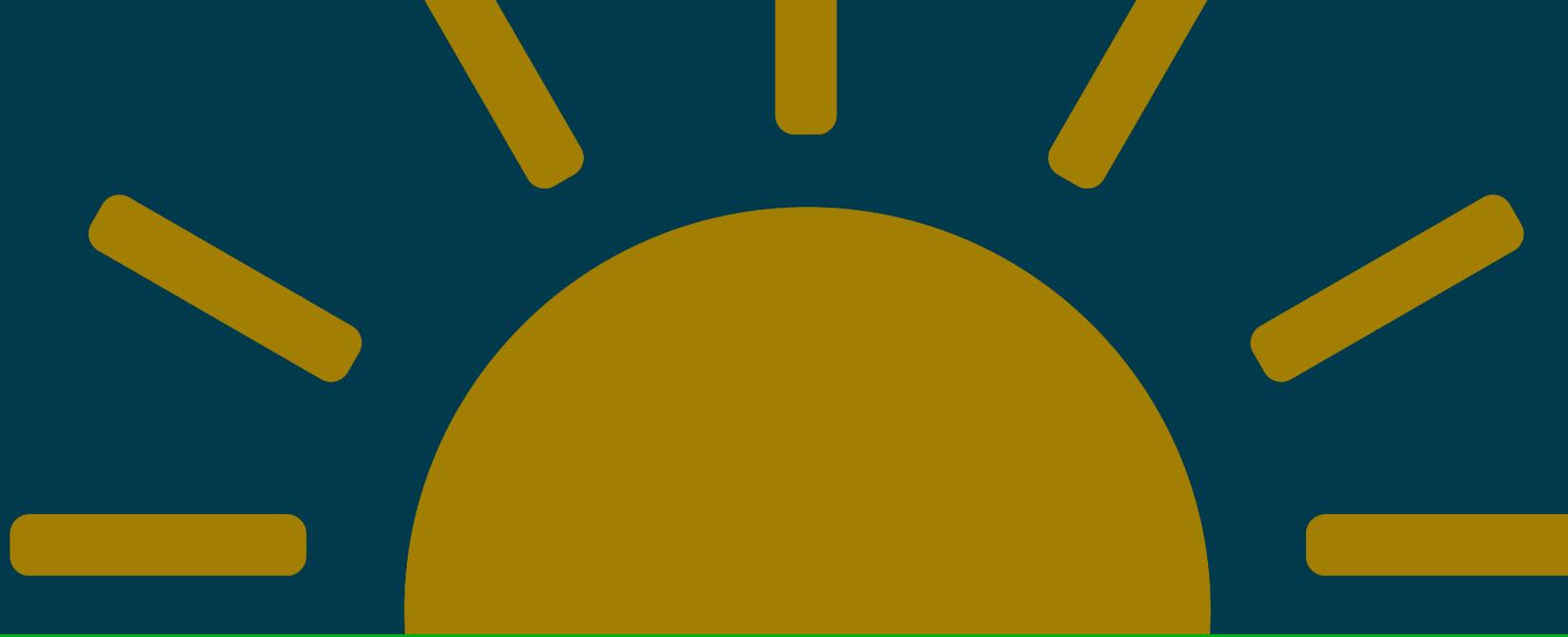
Cohort 1 - ABW Academy

October 03, 2022



Agenda

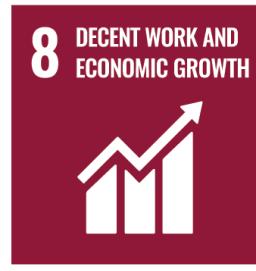
- Introduction to ABW
- A dose of inspiration from our Science-to-impact co-directors
 - Prof Dick den Hertog
 - Prof Dimitris Bertsimas
- Keynote – Priyank Hirani, data.org
- Cohort 1 Introductions
- Schedule of Academy
- Project Design and Implementation



Nowadays Analytics significantly contributes to the success of companies. **Our vision** is that Analytics has the same potential to contribute to humanitarian and societal challenges. **Our dream** is to apply analytics to contribute to the Sustainable Development Goals

Analytics to contribute to the:

SUSTAINABLE DEVELOPMENT GOALS





Analytics for a Better World

Founding partners:



UNIVERSITEIT
VAN AMSTERDAM

ORTEC
OPTIMIZE YOUR WORLD

MIT | **MIT**
MANAGEMENT
SLOAN SCHOOL

Combining forces to create impact:

Nonprofits

(Global institutes, Public sector, NGOs)

- Domain knowledge for problem scoping / solving
- Make impact through network of beneficiaries, volunteers and staff

Researchers

- Research on SDGs and novel analytics techniques
- Education to increase awareness and build skills

Business

- Analytics tooling development and implementation
- Training and knowledge sharing
- Funding/sponsorship



**Analytics for a
Better World**

ABW activities

ACADEMY

PROJECTS

MEETUPS

JOURNAL

RESEARCH

REPOSITORY

Core Team



Parvathy Krishnan

- CTO ABW
- Data Science Consultant Worldbank



Dick den Hertog

- Science to Impact co-director ABW
- University of Amsterdam Professor of Operations Research



Dimitris Bertsimas

- Science to Impact co-director ABW
- MIT Professor of Operations Research



Robert Monné

- Managing Director ABW

Supervisory board: [Willemijn van Dolen \(Prof. UvA\)](#), [Marc Salomon \(Dean UvA ABS\)](#), [Michael van Duijn \(CEO ORTEC\)](#), [Frans van Helden \(MD ORTEC\)](#)

ABW Research team



Claudia Orellana-Rodriguez

- Data Scientist in ABW
- PhD in Machine Learning with a focus on Digital News



Britt van Veggel

- PhD student at AWB
- TU Delft Applied Mathematics graduate specialized in optimization



Stevan Rudinac

- Researcher at ABW
- Associate Professor Artificial Intelligence for Business



Joaquim Gromicho

- Professor of Business Analytics at UvA
- Researcher at ABW
- Science officer ORTEC

ABW Team ++ for Academy



Margreet van der Pijl

- ABW Academy Co-ordinator

ABW Team ++ for Academy



ABW activities

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REPOSITORY

ABW Fellows

Agenda/Schedule

Margreet van der Pijl

Training Program – Week 1, 2 and 3

Week 1, 2, and 3 – Fundamentals

- Solid understanding of fundamentals required to implement an end-to-end data science project (Only using open-source/free tools and techniques)
- Learn the “Art-of-feasible”
- Hands-on training on tools and techniques
- 8 hours per week (24 hours in total of in-person sessions)
- Include pre-recorded videos and preparatory materials for beginners (online)

Topics Covered:

- Mathematics and Statistics for Data Science
- Data Science Project Lifecycle
- Python for Data Science
- Version control with GitHub for Data Scientists
- Basics of SQL and NoSQL Databases
- Principles of Digital Development
- Data Exploration and Visualization
- Dashboarding with Data
- Introduction to Machine Learning
- Introduction to Optimization
- Deep Learning Fundamentals
- Building Data Products with Open-Source Frameworks (Python Flask and Django)

Week 1

Topic	Date/time	Lecturer
Launch Event	Mon 3rd Oct – 3.00-5.00 pm	Prof Dick den Hartog Prof Dimitris Bertsimas Priyank Hirani Academy Team
Getting started with Data Science	Thur 6th Oct – 3.00-4.00 pm	Parvathy Krishnan
Version Control with GitHub for Data Scientists	Frid 7th Oct – 3.00-4.00 pm	Kasper Groenbroek
Python for Data Science	Frid 7th Oct – 4.00-6.00 pm	Kasper Groenbroek
Principles of Digital Development	Sat 8th Oct – 4.30-6.00 pm	Mateus Girafa Lachtermacher

Week 2

Topic	Date/time	Lecturer
Data Exploration and visualization	Thur 13th Oct – 3.00-4.00 pm	DHL
Dashboarding Fundamentals, Tools and Techniques	Frid 14th Oct – 3.00-4.00 pm	Tom van Es
Collecting and Storing Data- Open Data Sources, No SQL Database	Frid 14th Oct – 5.00-6.00 pm	Parvathy Krishnan
Mathematics and Statistics for Data Scientists	Sat 15th Oct – 3.00-4.00 pm	Joaquim Gromicho
Introduction to Machine Learning	Sat 15th Oct – 5.00-6.00 pm	Joaquim Gromicho

Week 3

Topic	Date/time	Lecturer
Cloud, Data Architecture, Deploying ML Algorithms (basics)	Wed 19th Oct 3.00-4.00 pm	Kasper Groenbroek
Introduction to Optimization	Thur 20 Oct 3.00-5.00 pm	Nanne + Joaquim Gromicho
Deep Learning Fundamentals	Fri 21st Oct 3.00-4.00 pm	Arjumand Younus
Explainable AI	Fri 21st Oct 4.30-6.00 pm	Daan Mocking

Training Program – Week 4

Week 4 - Deep Dive

- Learn Advanced tools and techniques in specilizations
- Hands-on Training
- Case Study demonstrations by invited global experts
- Participants are free to chose based on their availability

Electives Available:

1. Business Intelligence
2. Geospatial Data Analysis
3. Text Mining
4. Machine Learning

Project

Claudia Orellana-Rodriguez

Training Program – Week 5

Week 5 - Define your project

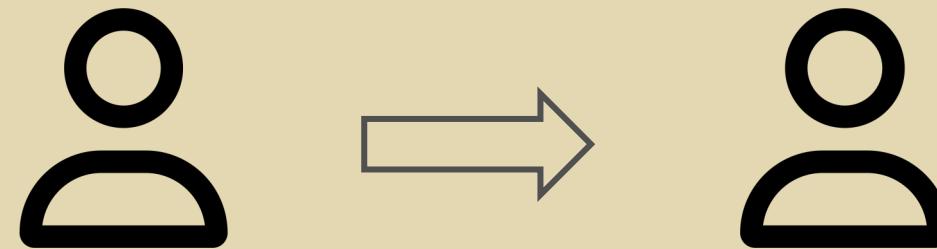
- Identify your Data Analytics Use Case
- Mapping stakeholders to be part of your supervisory panel

Project Scoping Week

- Work in a Data Science Project
- Organize multi-stakeholder consultations
- Facilitated Ideation workshop for Project Scoping

Project Implementation

- On weeks 6, 7, and 8 we will focus on hands-on co-creation



- Learn to make data-informed and data-driven decisions
- Learn to communicate solutions effectively - to stakeholders and peers

How will we co-create?

- Working together with a team of mentors and supervisors
 - From ABW, other partners, researchers and your organization
- Learning from your peers
- Documenting and communicating your project and its implementation



**Thinking about how to make
the world a better place?**

hello@analyticsbw.org



Thank you for your interest.

Analytics for a Better World Institute
www.analyticsbw.org

Location(s):

Amsterdam Business School
University of Amsterdam,
Plantage Muidergracht 12, 1018 TV
Amsterdam, The Netherlands.

ORTEC

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The Netherlands

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