Meets Students!

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M. Franceschini, M. Gabusi
Data & Analytics
Engineering Ingegneria Informatica SpA
ENG group offices

More than **50 offices** in Italy and abroad

Born in Padua (!) in 1984

- **Germany**: Amburgo / Berlino / Düsseldorf / Hannover
  - Monaco / Stoccarda / Wiesbaden
- **Belgium**: Bruxelles
- **Spain**: Madrid
- **Serbia Rep.**: Belgrado
- **USA**: Chicago / Troy / Wilmington
- **Brazil**: Belo Horizonte / Curitiba / San Paolo
  - Santo André / Rio de Janeiro
- **Argentina**: Buenos Aires
Data&Analytics Center of Excellence

- Advanced Analytics
- Big Data
- Business Intelligence
- DWH
Data&Analytics Center of Excellence
Collaboration

- **Programming** skills needed for everyone
- **Cross-disciplinary** projects (Finance, Telco, Security, PA etc.)
- **Cross-language** development (Python, Scala, Bash, Java, C++, etc.)
- **Cross-functional** collaboration and skills
- **Small teams** of Data Scientist and Data Engineers
- «Working software over extensive documentation»
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Data Scientist / Engineers... by training!

Advanced Analytics
- Engineering
- Physics
- Maths
- Statistics
- IT
- Neuro Science
- Human Science

Big Data & Infrastructures
- Engineering
- IT
- Maths & Stats
Which data?

- Structured Data
- Images
- Texts
- Audio
- Signals

Classification
Functional approximation
Clustering
Feature mapping

Dimensionality reduction
Network analysis
Scenario simulation
Example projects
Few projects / NPL Clustering (Finance)

- Engineering and development of customer clustering in a «full» Big Data environment (Spark)
- Clustering of Non-Performing Loans
- Implementation of customizable prescriptive logics
- 400 GB/day of data ingestion in Hadoop environment
Few projects / Knowledge Base and Graph Analysis

- Cyber security semantic network integrating data from various sources
- Semantic and statistical Text Analysis (deep learning models)
- Relevant edge extraction from a graph knowledge base (threshold, MST, SOM, Markov Clustering, etc.)

Internship Opportunities
- Text Classification
- Graph Embeddings
Few projects / Face Verification (Security)

Picture A

Picture B
Few projects / Face Verification (Security)

- Authentication to services via the App
- Face recognition techniques
- Comparison between the user's selfies and the ID photo shown on a document.

Internship Opportunities

- Face Recognition
- Liveliness Detection
Few projects / Face Verification (Security)

• Authentication to services via the App
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Internship Opportunities

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What about Big Data?

- Huge volumes
- Various Data Sources
- Multi-structured data
- Run ML & DL
- Fast Data/Streaming
- Analytics workloads
- Data Lakes
- DWH offload
- …much more…

Distributed Systems for Data Management

- Hadoop ecosystem
- NoSQL databases
- Distributed programming
- Cluster architectures
- Cloud enabling infrastructures
- Data gathering tools
- In-memory systems
- …many more…
Contacts in Padua

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Backup
Few projects / Non-Intrusive Load Monitoring (Internal)

Analysis of aggregate energy consumption of a user to identify the connected devices and power consumption.

For companies:
- Understanding consumer behavior and improvement of generated power planning.

For consumers:
- Identification of the most energy-consuming appliances and optimization of your consumption.
Our Customers