Careers in Data Analytics and Scientific Software

For STEM Graduates and Postgraduates

Part of the Altran Group

best company 2016
Key Facts

- Founded in 1980, Tessella employs over 220 staff.
- Part of the Altran Group, Tessella is Altran’s World Class Center for Analytics, helping innovative, globally-recognized organizations use data analytics, science and engineering to solve their complex issues.
- We solve real-world challenges across four main sectors:
  - Life Sciences and Pharmaceuticals
  - Consumer Goods
  - Energy: Oil, Gas and Nuclear
  - Public Sector: Space, Defense and Big Science
- We have an international presence, with offices in:
  - US: Boston MA, Houston TX, Washington DC
  - UK: Abingdon, Burton upon Trent, Stevenage, Warrington
  - NL: Den Haag
- We have been rated an “outstanding” place to work in The UK Best Companies awards every year since 2012.

Andrew Melkonian
PhD Geophysics

Andrew on the quality of Tessella colleagues...

“Since joining the Houston office earlier this year, the variety of projects I have worked on has greatly expanded my analytical and software engineering skills. I took a fascinating course in machine learning and immediately applied that knowledge to pharmaceutical and consumer goods projects.

The quality and attitude of my Tessella colleagues makes me look forward to teaming up with them to tackle the interesting and challenging problems typical of the work here. In my spare time, I enjoy the cuisine of Houston and play the bagpipes.”
Tessella is a global analytics and data science consulting services company that works with some of the world’s leading organizations in life sciences, energy, consumer goods and the public sector. We are scientists and engineers who enjoy solving complex, real-world problems. We closely collaborate with our clients to intimately understand their domains, and use our technical expertise to create and deliver innovative solutions.

We offer a unique proposition. The strong STEM academic backgrounds of our consultants combined with their computational expertise and an understanding of our clients’ domains sets us apart from our competitors.

Our consultants thrive on being presented with complex problems where innovative thinking is required, in pursuit of an optimal solution that will delight our clients and add real value to their businesses.

All of our staff are high-achieving problem solvers, over half of whom have PhDs. They enjoy working with like-minded, intelligent colleagues to create, develop and deliver innovative solutions and services that make a tangible difference to the world, from developing smarter drug trials to controlling the orbit and attitude of satellites.

Joining Tessella will provide you with a unique opportunity to work in a variety of sectors and solve challenges for some of the world’s leading companies. Your scientific or engineering background will enable you to understand the issues our clients face and this, combined with your analytical approach and computational skills, will allow you to make a real contribution to our success.

Projects are themselves varied and our consultants get to work in a range of roles, from Data Scientist and Software Developer to Project Manager and Business Analyst, in a client-facing environment. All of our projects are challenging and call upon the natural problem-solving abilities, domain expertise and technical excellence of our consultants. Staff are assigned to projects based on their skills and experience, with plenty of opportunities to learn and develop their careers.

On one project, you could be helping scientists analyze clinical trial data to narrow down likely drug compounds. On another, you could be writing software to visualize data from sea floor sensors to enable oil and gas engineers to decide where to drill next. On another, you could be developing algorithms to control the attitude of a satellite.

While the application of technology and software underpins many of our solutions, the majority of engagements with clients begin with a consultancy or data analytics focus to help identify where real value can be added.
With fusion, the lithium in one laptop battery plus half a bath of water would produce 200,000 kW-hours of electricity. This is equal to the EU per capita electricity production for 30 years. Fusion is an essentially unlimited fuel with intrinsic safety, no CO₂ or air pollution and no radioactive ash or long-lived nuclear waste. Tessella is supporting the scientists and engineers making fusion power a reality by developing instrument control frameworks and data processing, analysis and visualization platforms.

Our Culture

Our culture is a cherished part of our company. It is vital to our business, providing the structure within which we all operate. Staff engagement is at the heart of our culture and our HR strategy sets out our plans to ensure we are able to recruit, develop and retain the best staff.

Below are some of our culture statements, which aim to capture the unique DNA of Tessella. These statements communicate our culture: how we want to behave and do business. They enable new and existing staff to see who we are and what we believe, from the CEO to the newest recruit.

- We value a positive, can-do attitude and the ability to take the initiative
- We ask others for support; we give support freely and willingly
- We value versatility in our staff and the development of transferable skills
- We champion each other and give credit where it is due
- We don’t build barriers based on grade, function, geography or skillset

Case Study

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Isabella Rey
PhD Physics

Isabella on using her scientific knowledge...

“In the last two years I have worked on client sites developing control systems for a state-of-the-art, high-power laser and then for a world-leading neutron source facility, using EPICS, Python and Java.

I feel my background and my own experience in the lab give me a better understanding of the needs of the scientists, and I love the idea that I am contributing to making cutting-edge science possible!”
We are always looking for bright, enthusiastic and high-achieving graduates and postgraduates to join us. Requirements will vary depending on each role, but ideally you should have:

- BS (minimum GPA 3.5), MS or PhD in science, mathematics or engineering. We recruit from a wide range of STEM majors - see below.
- An understanding of big/complex data and the ability to interpret data in order to draw conclusions, using a wide variety of statistical and machine learning techniques.
- Software underpins many of the solutions we provide, so programming skills are required in one or more of the following: Java, Python, C, C#, C++, R, Matlab.
- Excellent written and verbal communication skills and the ability to explain complex technical solutions to clients from all backgrounds.
- The eagerness and capacity to quickly learn new domains and technologies and apply your skills to unsolved challenges.

**Mathematics**

- Chemical Engineering
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Chemistry**

- Geology
- Astrophysics
- Engineering Physics
- Forensic Science
- Astroinformatics
- Mechanical Engineering
- Environmental Science
- Aerospace Engineering
- Biochemistry
- Software Engineering
- Materials Science
- Geology
- Applied Maths
- Systems Biology
- Earth Sciences

**Mathematics**

- Engineering Physics
- Forensic Science
- Astrophysics
- Engineering Physics
- Astrophysics
- Bioinformatics
- Computer Systems Engineering
- Scientific Computing
- Molecular Biology
- Mathematical Biology
- Earth Sciences

**Physics**

- Geodesy
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Bioinformatics**

- Genetics
- Chemical Physics
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Engineering
- Atmospheric Science
- Biological Sciences
- Bioinformatics
- Computer Systems Engineering
- Scientific Computing
- Molecular Biology
- Mathematical Biology
- Earth Sciences

**Geology**

- Geodesy
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Geophysics**

- Geodesy
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Industrial Engineering**

- Geochemistry
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Materials Science**

- Geodesy
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Computer Science**

- Geochemistry
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Informatics**

- Geodesy
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Artificial Intelligence**

- Geochemistry
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

**Engineering**

- Geochemistry
- Astrophysics
- Engineering Physics
- Forensic Science
- Atmospheric Science
- Biological Sciences
- Biochemistry
- Chemical Physics
- Applied Maths
- Bioengineering
- Systems Biology
- Earth Sciences

BP’s Offshore Major Accident Risk (OMAR) modeling tool helps prevent the occurrence of serious accidents on BP facilities. Tessella’s 3D implementation provides spatial information and complex models of fire and explosion propagation, thus helping to identify the most effective remedial and preventative actions.
We value PhDs and the innovative problem solving skills they bring

We value PhDs; over half of our employees have earned them. The transferable skills gained during academic research play a vital part in understanding our clients’ requirements and translating them into practical solutions.

Postgraduates and PhDs join Tessella on a grade suited to their skills and experience. You will be provided with opportunities to continuously expand your areas of knowledge, enhance your skills and advance your career.

Below are some of the valuable transferable skills that postgraduates and PhDs bring to Tessella.

- Ability to work independently as well as part of a team
- Analysis of complex data
- Ability to present information with clarity to a range of people
- Initiative and self-reliance
- Ability to plan ahead and deliver to agreed timelines
- Problem-solving skills and intellectual curiosity
- Ability to communicate complex ideas in a range of formats
- Collaboration and teamwork to successfully achieve common goals

Case Study

When a leading oncology discovery company wanted to leverage the vast cache of publicly available cancer genomics and pharmacogenomics data to analyze the drivers of cancer, they turned to Tessella. Our cutting-edge data scientists delivered a custom software platform that gave cancer researchers a framework for integrating, understanding, and querying their data, so they could better explore new ideas for cancer treatments.
Variety of Sectors and Clients

We provide expertise to some of the best-known scientific and engineering organizations in the world. You may not have heard of Tessella, but you will certainly have heard of our clients:

- GlaxoSmithKline
- Southern Rail
- Unilever
- BAE Systems
- Shell Global Solutions (UK)
- Sellafield
- AkzoNobel
- AstraZeneca
- Science & Technology Facilities Council
- Clinigen
- European Space Agency
- BP

...and more

Hardeep Bansil
PhD Particle Physics

Hardeep on learning new domains...

“After completing my PhD in Particle Physics last year, I decided to pursue a career at Tessella. What attracted me was the perfect blend of data analysis and software development projects that suited my skills and interests.

Since joining, I have gained significant responsibility working on a system for standardizing and storing heterogeneous test data. This has broadened my knowledge of science and engineering fields that I was not previously exposed to.

I have enjoyed developing my technical and communication skills through Tessella’s training programs and by collaborating with clients to solve their problems. I also like the range of sports and social opportunities that are offered within the company.”
Your personal development is our priority, driven by you.

We recognize that our staff are our greatest asset and that for Tessella to succeed, all of our staff need the right knowledge, skills and attitude. To help us achieve this, we follow the framework provided by the UK Investors In People standard and we have been IIP accredited since 1995.

All staff receive an annual training allowance of 150 hours, which can be used to learn new technical and soft skills and develop consulting, business analysis and project management expertise, often leading to recognized professional qualifications.

Training at Tessella can take many different forms including internally and externally run courses, on-the-job training, self study, mentoring, conferences and workshops.

Case Study

5.2 billion tons of pesticides are used every year. Increased understanding of their lifecycle in the ground, gained through Tessella’s knowledge of partial differential equations and software engineering, helped an agro chemical business minimize their environmental impact.
Case Study

Setting out in 2018, the Solar Orbiter will take almost 3.5 years to arrive at its destination. Flying within 45 million km of the Sun, it will be closer than Mercury and will receive 25 times the solar radiation per square metre than the Earth does. As a key supplier to the ESA Solar Orbiter Mission, Tessella is designing the algorithms that will control the satellite on its journey.

Career Development

Choose your own career path based on your aspirations

We offer excellent prospects for your future. From growing your technical abilities to developing leadership skills, you will have an active, individual career development plan which is tailored to meet your career aspirations. We take personal development very seriously in order to stay at the cutting edge of our industry and also to ensure that you thrive with us.

While we do offer traditional career paths, most staff end up blazing their own based on their aspirations, the skills they have developed and the projects they have worked on. As your career progresses, you will develop expertise in a range of specialties and be able to contribute to projects in a variety of roles, from Data Scientist and Business Analyst to Software Architect and Project Manager, or any combination of these.
Sports and Social Club

We have an active sports and social club and a wide range of events are organized for the enjoyment of all staff. Activities are varied, from competitive sports to social gatherings.

Events are arranged regularly throughout the year and include:

- Photography competition
- Theater trips
- Wine tasting
- Bowling
- Dinner outings
- Go-karting
- Video game competitions
- Language clubs
- Clay pigeon shooting

...and more.

Benefits

The wellbeing and engagement of all staff is our priority and we enjoy a good work-life balance. In addition to our culture, an important component is our benefits package, which includes:

- Choice of healthcare plans
- Retirement savings plan
- Free life insurance
- 14 to 20 paid vacation days per year (depending on grade)
- 10 paid public holidays
- Short-term and long-term disability insurance
- Interest-free loan
- Help with relocation expenses

We also offer a range of additional options, including vacation trading (buy or sell up to 5 days) and extended healthcare benefits, which staff can select to fit their needs.

Margaret Bray
PhD Biostatistics

Margaret on training at Tessella...

“I joined the Tessella Boston office about five months ago, after finishing my PhD in Biostatistics followed by a short postdoc. In that time I have been impressed by the quality of my co-workers and thrilled by the exciting project that I am working on.

Currently, I am applying advanced Bayesian statistical techniques to problems in the pharmaceutical industry. I have also gained experience with big data analysis and software development, two areas that I was completely unfamiliar with only a few months ago.

The wide array of training opportunities available to me is just one of many examples showing how Tessella supports its staff, and is also one of my favorite things about working for them. In my free time, I enjoy exploring Boston and working out.”
By developing the integrated set of automated tracking algorithms for the SAMPSON Multi-Function Radar, Tessella has contributed to the most sophisticated radar system ever developed. The British fleet’s new radar system can detect a supersonic tennis ball 25km away, and is designed to simultaneously detect 900 targets smaller than a bird, against background noise equivalent to 10,000 mobile phone signals at ranges from 200 meters to 200 kilometers.

Case Study

As a company we believe that making a profit and growing our business goes hand in hand with responsibilities to our local communities, the environment, employees, clients and partners. We support and encourage community involvement and often arrange team building events with a focus on helping the local community.

We also make contributions to charities in which our staff are involved and hold dear. Below are some of the charities we have donated to in previous years:

- Pratham USA
- Cancer Research UK
- Derrian House Hospice
- Dublin Marathon
- The Artemis Great Kindrochit Quadrathlon
- Jeans for Genes
- Movember
- Down Syndrome Oxford
- War Child
- Crisis
- Diabetes UK
- Linda Foundation

Camiel on client-facing consultancy...

“Currently I am working on software for a Flood Early Warning System that is being used in over 30 countries for operational water management. It is a great opportunity to deploy my skills and learn something new every day, while helping clients around the world.

Although I am based on a client site, I meet my Tessella colleagues regularly for technical discussions and social events. I also enjoy attending the biannual company conference. This provides an opportunity to hear about other projects, technologies and industries in talks given by my colleagues from across the globe.”

Camiel van Breugel
MSc Computer Science
What is the recruitment process?

The best way to apply is online at http://jobs.tessella.com. Alternatively, we can accept applications by email to jobs@tessella.com.

We aim to get back to applicants within one to two weeks. If selected, we have a two-stage interview process. The first is for about an hour and is held in one of our offices or by Skype or telephone, depending on the candidate’s location. If successful, the second stage is a technical assessment day where we give candidates a taste of what a working day at Tessella would be like.

Does Tessella offer internships?

Unfortunately we are unable to offer internships due to the client-based nature of our work and confidentiality of our projects. However, we hope to be able to have more opportunities for internships over the coming years.

For other FAQs, visit our website: https://jobs.tessella.com/frequently-asked-questions/