Careers in Data Analytics and Scientific Software

For Scientists and Engineers

Part of the Altran Group
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-recognised organisations 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, Defence and Big Science

We have an international presence, with offices in:
- NL: Den Haag
- UK: Abingdon, Burton upon Trent, Stevenage, Warrington
- US: Boston MA, Houston TX, Washington DC

We have been rated an “outstanding” place to work in The UK Best Companies awards every year since 2012.

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**Duncan van Roermund**  
*MSc Computer Science*

**Duncan on variety at Tessella...**

"After completing my Computer Science master three years ago, I quickly identified Tessella as my ideal workplace, with interesting colleagues and good training opportunities.

Soon I got to work on many different projects – enterprise web applications, legacy simulation suites and innovative analytical visualisations, to name a few – allowing me to bring my knowledge to the table, try out different approaches and keep learning new things.

What I like most is the possibility to share my knowledge with co-workers and helping them with the exciting challenges our work brings."
Tessella is a global analytics and data science consulting services company that works with some of the world’s leading organisations 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 bèta academic backgrounds of our consultants combined with their computational expertise and an understanding of our clients’ domains sets us apart from our competitors.

About Us

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 analyse clinical trial data to narrow down likely drug compounds. On another, you could be writing software to visualise 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.

What Will I Be Doing?

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.

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 visualisation platforms.

Case Study

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

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 scientists and engineers to join us. Requirements will vary depending on each role, but ideally you should have:

- Masters or PhD in science, mathematics or engineering. We recruit from a wide range of beta subjects - 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.

**What We Look For**

![List of subjects](image)

What We Look For

Case Study

TNO is the largest research institute in the Netherlands. The Fluid Dynamics department wanted to develop a new high quality, user-friendly GUI for PULSIM, a powerful software tool used by oil and gas organisations worldwide. The PULSIM system evaluates process installations, carrying out pulsation and mechanical analysis. Tessella’s specialist software engineering skills and in-depth understanding of fluid dynamics led to a successful collaboration with TNO. The new, simplified GUI is a big improvement that allows the user to take advantage of the full functionality of the software and Tessella continues to provide long-term support, service and maintenance.
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.

Masters 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 masters 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

In collaboration with Deltares, Tessella developed Delft-FEWS (Flood Early Warning System). Tessella’s knowledge of modelling software, professional development techniques and ICT complemented Deltares’ expertise in water technology, hydrology and software development. The result was a modular, customisable package that enables authorities worldwide to accurately forecast flood risk and protect local communities. Deltares and Tessella continue to support and extend Delft-FEWS through a joint team based in the Netherlands. Further development is planned to expand the system to model and predict other environmental challenges.
Variety of Sectors and Clients

We provide expertise to some of the best-known scientific and engineering organisations 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  Deltares  TNO  Sellafield  AkzoNobel  AstraZeneca  Science & Technology Facilities Council  Clinigen  European Space Agency  BP  ...and more

LIFE SCIENCES
Our advanced analytics services provide R&D leaders with the insights to make decisions that advance drug discovery and development to combat diseases, deliver treatment to those that need it and control pests that impact food production.

CONSUMER GOODS
We work with Consumer Goods companies to harness the power of advanced analytics to improve R&D efficiency and develop products that allow us all to live happy and healthy lives.

ENERGY
Our work helps upstream and downstream companies integrate innovative science and engineering techniques into their decision-making processes to enable drilling teams across the world to streamline the creation of new wells and keep people safe on offshore facilities.

SPACE & DEFENCE
Aeronautics, space and defence companies face unique technical challenges and require extremely high levels of engineering accuracy. We help them find optimal and innovative answers to their most complex engineering questions.

BIG SCIENCE
We help government-funded scientific research organisations analyse and manage the vast amounts of data they generate. Our work is informed by a culture of science and a long history in Big Science, including neutron sources, nuclear fusion, lasers and climate and environmental science.

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 standardising 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 programmes 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 recognise 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 recognised 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 minimise 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.

Whilst we do offer traditional career paths, most staff end up treading 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 specialisms 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.
We have an active sports and social club and a wide range of events are organised 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
- Theatre trips
- Wine tasting
- Bowling
- Family days
- Pool and snooker
- Go-karting
- Pub quizzes
- 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:

- 26.5 days holiday per year plus Public Holidays
- Defined contribution pension scheme
- Free life assurance
- Help with relocation expenses

We also offer a range of flexible benefits, which staff are free to manage to fit their needs. These may vary from year to year but typically include:

- Labour Cost Ruling
- Holiday Trading
  - Buy or sell annual leave
- Microsoft Office 365
  - Install MS Office at home
- Part-time working

**Jos van Rijssel**

PhD Physical Chemistry

**Jos on training at Tessella...**

“I joined Tessella a little over a year ago after completing a PhD in physical chemistry. Shortly after I started, I embarked on a project that is still continuing today. The opportunities offered by Tessella give me the possibility to choose the direction in which I want to develop. This is reflected in the variation of the training that I receive. Even though I have been working on a single project since I started, I get the full support to expand into new directions, from software development towards analytics, broadening my skills and experience.”
Case Study

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 metres to 200 kilometres.

Community Responsibility

As a company we believe that making a profit and growing our business goes hand in hand with responsibilities to 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:

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

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.”
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/

Case Study

AkzoNobel produce over two thousand individual paint colours, enough to paint The Shard entirely in different 6 inch stripes. Tessella developed the algorithms that power Dulux ColourClick, the app that helps people find the right colour palette for their rooms. The algorithms behind ColourClick came out of collaborative research with AkzoNobel and had never been applied that way before.

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.”

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