Careers in Data Analytics and Scientific Software

For STEM Graduates and Postgraduates
Founded in 1980, Tessella employs ~250 staff.

Part of the Altran Group, Tessella is Altran’s World Class Center for Analytics, helping innovative, global organisations use data analytics and software engineering to solve their complex problems.

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:
- UK: Abingdon, Burton upon Trent, Stevenage, Warrington
- US: Boston MA, Houston TX, Washington DC
- NL: Den Haag

Awarded the top “extraordinary” 3 stars by Best Companies and listed in The Sunday Times Top 100 Small Companies To Work For 2017.

Investors In People accredited since 1995 and IIP Gold accreditation awarded in 2017, placing us in the top 2% of organisations assessed.

Andrew Bailey
PhD Pure Mathematics

Andrew on career development at Tessella...

“Over the last five years, I’ve worked on diverse projects in petroleum reservoir analysis, fire/explosion modelling and pesticide degradation kinetics, as well as software development programmes.

Thanks to an excellent culture of staff development, I’ve grown into a company .NET expert and technical team leader and have sat on internal committees developing Tessella’s internal resources. The best thing about working here? A culture of doing the right thing for both clients and staff, which is the lifeblood of the company.”
Tessella is the Analytics World Class Center of the Altran Group. We are scientists and engineers who enjoy solving the real-world technical challenges faced by global companies at the forefront of science and technology. Using a combination of deep domain knowledge and technical expertise, including data science, analytics and software engineering, we work with our clients to find new ways to unlock the value held within their data, enabling better-informed business decisions.

Our work is at the cutting edge of high-tech R&D. For example, we solve computational problems for chemists at the early stages of drug discovery and development, ultimately getting drugs to market faster. We help consumer goods companies model and simulate new product ideas and perform data analysis to improve their processes. We also support oil and gas engineers with the computational challenges of exploration and production, from reservoir modelling to writing control systems. In space and defence, we have written algorithms and solved complex mathematical problems to control satellites and radar systems.

About Us

A career at Tessella provides an opportunity to solve a variety of science and engineering problems for world-leading companies. You will apply the knowledge you have gained during your studies and use a range of skills to create, develop and deliver solutions that truly make a difference.

Projects can span a range of activities and your responsibilities will include:

► Combining domain knowledge and technical skills to understand and solve the complex challenges facing our clients.
► Using data science, analytics and a variety of analytical, statistical or machine learning techniques to interpret client data, helping them to make better-informed business decisions.
► Designing and developing custom software solutions or tools.
► Building strong relationships, communicating and collaborating with clients and colleagues.

Our work is exciting and rewarding and provides plenty of opportunities to learn and develop. You will be assigned to projects based on your existing skills and experience, but you will also learn new domains and technologies and apply innovative thinking and transferable skills to solve new challenges.

Projects are varied and over the course of their careers our consultants can perform a range of roles depending on their aspirations, from Data Scientist and Software Developer to Project Manager and Business Analyst.

What Will I Be Doing?

Elena on developing her skills...

"I joined Tessella after a Masters in pharmacy and an experimental PhD in cancer research and nanotechnology. My technical knowledge was rather limited at the start, but Tessella’s excellent training programme and the opportunity to work on three innovative and challenging projects have allowed me to greatly enhance my skills in a variety of technologies. For example, I have worked on a cutting-edge web application to help forge relationships between universities and small businesses, and a large reservoir modelling package for a major oil firm.

Tessella also has a very active sports and social club which offers a wide range of activities, making it easy to get to know your colleagues and find new friends."

Elena Heister
PhD Cancer Research

Rob on challenging projects...

“Since joining Tessella after finishing a PhD in Physical Chemistry, I have been working on challenging projects on software development and data analysis for various clients. For example, I have supported chemical analysts on their data analysis and I have worked on pulsation simulation software in C#. Meanwhile, I have taken and enjoyed all the training opportunities that Tessella offers, bringing my technical skills to a new level.”

Rob Kortschot
PhD Physical Chemistry
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 CO$_2$ 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

Isabella Rey 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!”

Our Culture

Our culture is a cherished part of our company. It is vital to our business and provides 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, 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 value diversity in our staff
- We champion each other and give credit where it is due
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:

- BSc (min 2.1), MSc or PhD in science, mathematics or engineering. We recruit from a wide range of STEM subjects - see below for examples.
- An understanding of big data and the ability to interpret complex data using a variety of analytical, statistical or machine learning techniques.
- Software underpins many of the solutions we provide, so you need to have some programming skills. We do not expect you to be an expert, but a good grounding in one of our core languages is required: Python, C, C#, C++, Java, R, Matlab.
- Excellent interpersonal skills and the ability to explain complex concepts to clients and colleagues from all backgrounds.
- The eagerness and capacity to quickly learn new domains and technologies to solve new challenges.

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Computational Biology

Chemistry

Mathematics

Bioinformatics

Geophysics

Engineering

Artificial Intelligence

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Computational Biology

- Geology
- Astrophysics
- Engineering
- Physics
- Forensic Science
- Astrodynamics

Chemistry

- Chemical Engineering
- Atmospheric Science
- Biological Sciences

Mathematics

- Biochemistry
- Software Engineering
- Materials Science
- Geochemistry
- Applied Maths
- Bioengineering
- Systems Biology

Bioinformatics

- Genetics
- Chemical Physics
- Bioinformatics

Geophysics

- Astronomy
- Informatics
- Metallurgy
- Zoology
- Computer Systems Engineering

Engineering

- Scientific Computing
- Molecular Biology
- Mathematical Biology
- Earth Sciences

Artificial Intelligence
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

If you deliver one trillion litres of drinking water to over fourteen million customers and operate 85,000 miles of water mains and sewers, enough to go three and a half times round the planet, getting an optimal network matters. Tessella helped a leading utility company discover network designs that reduced total lifetime costs by billions, while still delivering a robust and effective service.
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 Global Solutions (UK)  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, 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 and skills. We follow the framework provided by Investors In People and we have been IIP accredited since 1995. In 2017, we were awarded the Gold accreditation, which places Tessella in the top 2% of organisations assessed.

All staff receive an annual training allowance of 150 hours, which can be used to learn new technical and soft skills and develop expertise associated with their chosen career, such as consulting, business analysis or project management skills, often leading to recognised professional qualifications.

Training at Tessella can take many different forms including internally and externally run courses, 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.
Setting out in 2020, 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.

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

While 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, which is run by staff and subsidised by Tessella. A wide range of events are organised for the enjoyment of all staff, from friendly sports to social gatherings.

Events are arranged regularly throughout the year and include:

- Photography competition
- Theatre trips
- Wine tasting
- Ten-pin bowling
- Punting
- Cricket
- Go-karting
- Pub quizzes
- Video gaming
- Language clubs
- Clay pigeon shooting
- Lunchtime sports sessions

Benefits

The wellbeing and engagement of all staff is our priority. We enjoy a good work-life balance and support flexible working requests where possible. We also offer a comprehensive benefits package, which includes:

- 25.5 days holiday per year plus Bank Holidays
- Non-contributory pension scheme
- Free life assurance
- Interest-free loan (discretionary)
- Enhanced maternity, paternity and shared parental pay
- Help with relocation pay
- Long term sickness insurance

We also offer a range of flexible benefits, which staff are free to manage to fit their needs. These include:

- Cycle to work scheme
  Save up to 42% on a new bike
- Holiday trading
  Buy or sell annual leave
- Private healthcare
  For you and your family
- Microsoft Office 365
  Install Office products at home
- Discount shopping scheme
  Exclusive savings on 1000s of products and services
- ...and more

Camiel van Breugel
MSc Computer Science

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.”
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.

Case Study

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:

- 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
- Abingdon Rowing Club

Albert on training at Tessella...

“I have had the opportunity to contribute to a vast variety of interesting projects, from data analysis about what constitutes the perfect potato crisp to programming simulations of large chemical reactors to eliminate impurities in medical drugs.

This was made possible by Tessella’s strong focus on individually tailored training. I have grown my skill set more quickly and in more areas than I imagined possible, from programming languages to advanced machine learning techniques. Now, for each project I work on, I can tackle exciting problems in new ways.”

Albert Ziegler
PhD Mathematics
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 more FAQs, visit our website:
https://jobs.tessella.com/frequently-asked-questions/

Andrew Melkonian
PhD Geophysics

Andrew on the quality of Tessella colleagues...
“Since joining the Houston office, 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.

I have been impressed by the quality and attitude of my Tessella colleagues and I enjoy 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.”

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.