

Essex County Council

Using data analytics for social good: How an English local authority with a population of over 1.8 million uses DataCamp to forecast demand for social care and health services among vulnerable populations to deliver services to the right people at the right time.

Essex County Council (ECC) provides essential public services for one of the largest administrative counties in England. They have recently been making use of predictive analytics to improve how they deliver these services.



DataCamp has given our technical and non-technical teams a significant step up in terms of their ability to deliver more value to our constituents and partner agencies—the data skills they picked up are starting to materialize in our work, which is really great to see.

STEPHEN SIMPKIN, DATA SCIENCE FELLOW AT ESSEX
COUNTY COUNCIL

A data talent shortage in government roles

ECC joined DataCamp in 2019 when they realized organization-wide upskilling would be needed. Many staff had a strong background in using Excel to analyze historical data, but did not have the confidence to explore new open-source technology due to a lack of formal training. ECC, like many local authorities, would have to adapt in order to achieve their analytical aspirations.

Another issue ECC faced was maximizing the use of their data. Only 20% of ECC's data was quantitatively structured—the rest was unstructured through staff notes as paper documents or PDFs. This resulted in over 2.5 terabytes of lost or not easily retrievable data, as it would have taken a human 4,000 years to read it without stopping. Because so much of this data is stored as case notes and data entry was manual, ECC decided to study natural language processing to help them grab documents and easily scrape insights from them. ECC is now exploring the additional commissioning intelligence that can be acquired from analyzing vast quantities of text.

The COVID-19 pandemic would later present additional resource challenges. Supporting vulnerable children is a countywide priority, but the lack of in-person schooling and consistent face-to-face engagement made this more challenging. Alongside other societal factors, this resulted in a reduction of referrals to social care services. This was at a time when national research suggested actual incidents of abuse and neglect were increasing.

ECC needed a way to understand the changing demand they were experiencing now, and what future demand might look like, so they turned to predictive analytics to build forecast models and perform scenario analysis.

“Applying data science to service delivery meant addressing our staff base’s skills gap. One size doesn’t fit all when it comes to training, so staff appreciated the fact that they could fit DataCamp learning around their working day and at a pace that suited them”.

—STEPHEN SIMPKIN



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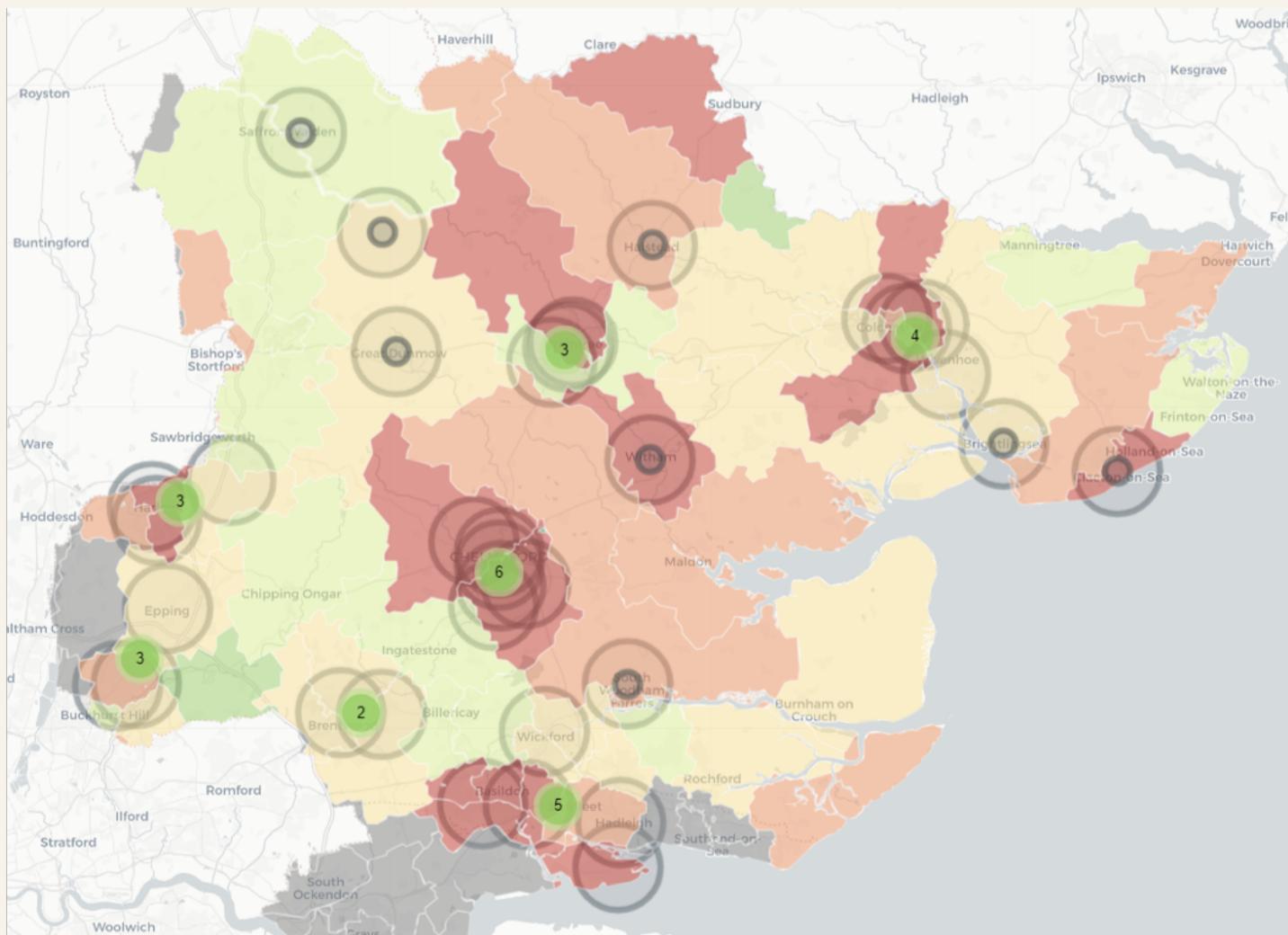
The solution: Organization-wide upskilling

With the decision to increase usage of predictive analytics, ECC decided organization-wide upskilling would be the best way to achieve this, which was facilitated through a self-paced learning program with DataCamp.

As different staff members had different learning styles and schedules, many of them appreciated the fact that they could fit this learning around their work day and at a pace that suited them.

Accelerating the use of data science in ECC

More than 50 ECC learners—along with partner agencies such as Essex’s fire and police services—have taken DataCamp’s courses, primarily in R and Python. With over 200 hours spent learning, they have acquired skills they have been able to apply to their daily work. This has included creating 40 different forecasts—together with probability analyses—for resource needs in care services and for determining optimum food bank locations (mapped in the image below).



By using DataCamp, ECC has both enhanced its ability to deliver valuable public services and empowered its staff to make better data-driven decisions.



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80% of the Fortune 1000 who use
DataCamp to upskill their teams.**

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