You might be surprised to know what maps can do for you. Getting to a destination in a timely manner is great, but did you know you can use a map to predict how a natural disaster might impact infrastructure? Or see if there’s a relationship between commercial fishing areas and paths of sea turtles?

If those notions surprise you, you might be thinking of a traditional 2D map. But with new technology designed to give data more depth (and height), seeing a mass of numbers and figures in 3D can be illuminating, surprising, and downright educational.

Esri, a company synonymous with modern mapmaking, has been paving the path for everyone to understand how geographic information systems (GIS) can decipher massive amounts of data, elucidate patterns, and be used to solve real-world problems.

Using software called ArcGIS, users can create maps for work projects, class assignments, planning, and more. Maps that utilize 3D GIS allow for spatial analysis with realistic-looking 3D environments built from 2D data. Though it’s popularly used for elevations or height, the use of 3D visualization is restricted only by your creativity.

Based out of Redlands, Esri (short for Environmental Systems Research Institute) pioneered GIS software and its practical application—and that is, in part, why UCR Extension has partnered with them to design and maintain a reputable GIS program for the past 25 years.

Jack Hunt, GIS instructor, and one of Esri’s account executives attests to the impact UCR Extension’s program has made for both students and professionals in the GIS world. “UCR Extension provides a platform for all levels of GIS knowledge, from getting to know the basics of ArcGIS Online to developing powerful web map applications and big data analytics,” says Hunt. “Students looking to get started with GIS or expand advanced programming skills have a great course catalog to pick from, in addition to certification tracks.”

Hunt’s own interest and experience exemplifies why the marriage of Esri and UCR Extension works so well. “My initial interest in teaching for UCR Extension was due to its strong reputation throughout the GIS community. Also, many of my fellow instructors at UCR are also Esri colleagues which helps keep course content relevant to the current offerings and releases across the ArcGIS platform.”

But why is GIS so important? “GIS has the power to enrich understanding for many organizations, professions, and disciplines. That is why I encourage
students to explore the benefits of geographic location to promote discovery and decision-making across their chosen profession or field of study,” Hunt explains. He himself is an example: With a career in sales and marketing, Hunt earned an internship with Esri and quickly understood the value of 3D representation, particularly with city features. Seeing directly how that visualization makes analysis and decisions not just possible but informed—better, essentially—made him a believer in its potential and advancement.

3D GIS, in particular, continues to evolve with app additions and new options. Hunt’s team, Smart Cities, introduced two new products in July: ArcGIS Urban (a 3D city-planning tool) and ArcGIS Indoors (an indoor GIS system used to maintain floorplan data). “Many of the solutions that we develop at Esri originate from configuration or customizations of ArcGIS software to address common challenges.”

Though GIS can substantially impact how leaders make large-scale decisions, it’s oddly one of those tools many are still unfamiliar with. But Hunt predicts that will change: “I think GIS will increase adoption of general consumer use as configuration tools become more accessible and valued in our daily lives. I’m excited to see the future of mobile wayfinding enriched with community analytics and how that may allow people to better plan and encourage sustainable practices.”

So instead of using a map to only ask “where,” you can use it to ask (and answer) “what,” “how,” “which,” and even “why.”

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Map out your new future in one of UCR Extension’s GIS Professional Certificate Programs. Start with Applied GIS or GIS Fundamentals and advance to GIS Management.

Visit www.extension.ucr.edu/gis or email prodev@ucr.edu to explore your options!

Do you want a career or just a job?
Do you want to be paid for doing something you love to do or just collect a paycheck? A career where GIS is a fundamental part of your day allows you to be immersed in a field where you can continually grow and move forward in an environment of lifelong learning.

Do you want to do something cool?
GIS is an exciting, rapidly changing, and cool technology that merges nicely with many other technologies you may be interested in, such as video, web development, and phone apps.

Do you want to do something important?
GIS is a green technology that is making a difference on our planet and to its people every day for key decisions about wildlife habitat, human health, renewable energy, climate change, water quality and availability, wilderness areas, and much more.

Visit www.esri.com to learn about career paths in GIS.

This fall, Jack Hunt is teaching Practical Approaches for Implementing GIS, and will teach Fundamentals of 3D GIS in the winter quarter. He also teaches in our 6-week GIS Fundamentals Intensive Summer Academy.