

What is GalvanizeU?

GalvanizeU is a new division of the Galvanize, Inc. ecosystem focused on designing, developing and delivering a fully accredited master's degree in engineering in the field of data science in conjunction with the University of New Haven.

What makes GalvanizeU different?

GalvanizeU will create a new class of data scientists with the knowledge, coding ability and experience demanded of top industry performers.

Why are we building GalvanizeU?

While there has been an overwhelming explosion of data now available for industry to take advantage of, there is an absence of skilled data scientists able to make effective use of that data. Here are three reasons we think this field is important:

- **Rarity:** Data scientists are *really* hard to find. "People call them unicorns," said Jonathan Goldman, who ran LinkedIn Corp.'s LNKD-1.77% data-science team.
- **Demand:** McKinsey Global Institute report estimates that by 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills.
- **Growth:** Between 2010 and 2020, the data scientist career path is projected to increase by 18.7, and the big data industry is expected to be a \$53.4 billion industry by 2016.

So what does it take to train a data scientist?

- **Background knowledge:** Understanding the statistics and machine learning that goes on underneath the algorithms a data scientist uses.
- **Coding ability:** Familiarity with the coding techniques and tools required to build data science products.
- **Practical industry experience:** The ability to work with real-world clients, listen to business challenges and effectively transform and communicate how those challenges can be met by a data science solution.

How are we going to do this?

Our master's program is dedicated to training data scientists in all three of these dimensions by treating the training process the same way that experts in other *practicing fields* gain their training.

We designed the program to be a well-balanced mix of interactive classroom time with expert faculty; lab hours, where students can flex their coding muscles building data science products and machine learning algorithms; and applied learning under faculty mentorship, where students will learn how to perform data science skills in three key contexts:

- In their final master's "capstone" project
- During a 3-4 month supervised internship period with Galvanize partner and member companies.
- By shadowing our faculty as they engage with real-world industry consulting with our Galvanize experts.

Who are our Galvanize experts?

When the GalvanizeU faculty are outside the classroom, they'll consult with industry partners and Galvanize member companies to help tackle their biggest data science problems. Additionally, GalvanizeU students will shadow these interactions to learn firsthand about going from a business problem to data science solution.

Under faculty supervision, students will have a chance to contribute to these projects as part the instructional portion of the program. We believe that a portfolio of successful, real-world projects will make our GalvanizeU graduates stand out during the hiring process.

Who is the Head of GalvanizeU?

With over a decade of teaching experience at the university level, Mike Tamir serves as CSO and head of GalvanizeU, taking the lead on designing the master's degree program in the field of data science. He's focused on building a well-rounded curriculum that develops the skills required of high-performing data scientists in the industry.

Before GalvanizeU, Mike led several teams of data scientists as chief data scientist for PersonaGraph and as director of data sciences for Sears Holdings. He began his career in academia serving as a mathematics teaching fellow for Columbia University and teaching at the University of Pittsburgh. His early research focused on developing the epsilon-anchor methodology for resolving an inconsistency he highlighted in the dynamics of Einstein's general relativity theory and the convergence of "large N" Monte Carlo simulations in statistical mechanics' universality models of criticality phenomena.

How is Galvanize able to deliver an accredited graduate program?

Galvanize has established a strategic partnership with the University of New Haven to deliver this master's degree program. The University and all of its programs are fully accredited by the New England Association of Schools and Colleges (NEASC). Mike Tamir and other faculty in the GalvanizeU program serve as faculty members in the Department of Electrical and Computer Engineering and Computer Sciences in the Tagliatela College of Engineering at the University of New Haven. The Master of Engineering degrees are granted by the University.

What is the University of New Haven?

The University of New Haven in Connecticut is a private, top-tier comprehensive institution recognized as a national leader in experiential education. Founded in 1920 on the campus of Yale University in cooperation with Northeastern University, the University of New Haven moved to its current West Haven campus in 1960. The University operates a satellite campus in Tuscany, Italy, and offers programs at several locations throughout Connecticut and in New Mexico. The University of New Haven is fully accredited by the New England Association of Schools and Colleges (NEASC).

More information is available at <http://www.newhaven.edu>.

What is GalvanizeU's relationship with University of New Haven?

University of New Haven is our **academic** partner; they are issuing the degrees for students, appointing and evaluating faculty serving in California, and approving and assessing curricula and program outcomes.

How long is the graduate program, and what is the cost?

This is a 12-month graduate program that consists of 30 credit hours, and the tuition is \$48,000. Financial aid will be made available through our accreditation partner, the University of New Haven.

Where is the program being offered?

The San Francisco Bay Area

When do we begin accepting applications?

On October 29, 2014, we will begin accepting applications for the master's degree program during a rolling acceptance and enrollment period. This means we will accept students until the course is full (30 students). After that period we will begin filling the subsequent cohorts for the summer and fall of 2015.

When does the 2015 program begin and end?

The first cohort of students will begin classes on January 20, 2015. Our second cohort of students will begin classes on June 22, 2015, and our third cohort will begin on August 24, 2015. The students will take all 10 courses together in sequence. The last two courses of the program are an internship and capstone project focused on getting the students the industry experience they need.

What is Galvanize, Inc.?

Galvanize is a community of urban campuses for digital innovators and entrepreneurs that aligns work and learning by combining education, experience and industry under one roof. Since launching its first campus in Denver in October 2012, Galvanize has expanded to San Francisco, Calif., and Boulder, Colo., with more campuses due to open throughout the U.S. in 2014 and 2015. Each campus offers training and education opportunities, tech-focused events and a variety of workspace options. The organization was co-founded by three entrepreneurs – Jim Deters, Lawrence Mandes and Chris Onan – with a shared vision of creating a galvanized community to serve digital innovators at any stage of their entrepreneurial journey.

To learn more about Galvanize and membership, visit <http://www.galvanize.it>.

For more information on Galvanize's education offerings, including its 24-week immersive, full-time developer training programs at gSchool, go to <http://www.galvanize.it/school>.

How does GalvanizeU fit in with the Galvanize Community?

The Galvanize community plays a key role in helping GalvanizeU students develop practicable and applicable data science skills. Member companies will be encouraged to take part in the GalvanizeU internship program, which offers them cost-free interns (mentored by our faculty) to help them to meet their data science needs.

This internship program will commence once students have completed the instructional period of the GalvanizeU curriculum.

How is GalvanizeU different from gSchool?

gSchool is where Galvanize delivers its unaccredited educational programming. The 24-week immersive, full-stack developer training program is where gSchool earned its reputation as an exceptional boot camp delivering highly skilled developers into the market. The gSchool full-stack curriculum includes Ruby on Rails, Sinatra, Javascript, CSS3, HTML5, Responsive Design, Database, API's Version Control and Test Driven Development, but the main focus is Rails. The gSchool program has graduated three cohorts of students on our Colorado-based campuses, with 75 students in total. We currently have 81 students enrolled on our three current programs being held in San

Francisco, Denver and Boulder and anticipate having three new cohorts of students starting in these same locations in January 2015. In 2015, we anticipate having 20 gSchool courses across 3-4 campuses, with 560 students enrolled. This includes our new Google GO immersive course being delivered in San Francisco and Denver. We currently have a 99% placement rate for all of our gSchool graduates. Graduates have gone to work everywhere from IBM, Pivotal Labs and Quick Left to some of the hottest startups like Zayo and TeamSnap.

Where is the Galvanize campus in San Francisco?

Located at 543 Howard St. in the heart of SOMA, the 72,000-square-foot, highly appointed campus will soon be home to up to 700 business members, six fully equipped classrooms, 30+ dedicated meeting spaces, and large multi-functional event spaces including a rooftop deck and a cafe. It is also home to space dedicated to our partners at Google and IBM. This campus opened in September 2014.

Galvanize has two other campus locations in Denver and Boulder, CO currently. The Golden Triangle location in Denver located at 1062 Delaware, St. was the first Galvanize to open in 2012, it currently has over 200 business members. The Boulder Galvanize location opened in May of 2014 and is located at 1035 West Pearl Street.

A list of web articles referencing the challenge of finding and training data scientists:

- <http://www.extension.harvard.edu/hub/blog/extension-blog/why-data-science-jobs-are-high-demand>
- <http://www.forbes.com/sites/emc/2014/06/26/the-hottest-jobs-in-it-training-tomorrows-data-scientists/>
- <http://venturebeat.com/2013/11/11/data-scientists-needed/>
- http://www.mckinsey.com/features/big_data
- <http://blog.pivotal.io/pivotal/news-2/mckinsey-report-highlights-the-impending-data-scientist-shortage>
- <http://www.informationweek.com/big-data/big-data-analytics/are-you-recruiting-a-data-scientist-or-unicorn/d/d-id/899843>
- <http://online.wsj.com/articles/academic-researchers-find-lucrative-work-as-big-data-scientists-1407543088>