

IRVINE/ORANGE COUNTY EMERGING AS GLOBAL LEADER IN TECH & CYBERSECURITY



Bryan Starr
President & CEO,
Greater Irvine Chamber,
Economic Development,
Destination Irvine

Orange County has long been known for its dominance in medical device across multiple healthcare industries. More recently, the county's artificial intelligence (AI) sector has emerged as a leader in Southern California, horizontally impacting most industries, including technology and medical technology.

The key components to creating a strong AI ecosystem are universities, specific industries in both tech and MedTech, organizations that can provide leadership, entrepreneurs, and capital. Orange County — bolstered in these areas by two key players, UCI Beall Applied Innovation and startup accelerator Octane — is well-poised to become a leading center for AI globally, similar to medical device.

Octane's LaunchPad Accelerator continues to experience high-quality applications, and the percentage of AI companies that are admitted to the accelerator continues to grow, now reaching over 35%, according to Octane CEO Bill Carpow.

"We have the ability to expand the output of LaunchPad and focus even more precisely on AI," Carpow has said of his organization.

Undoubtedly, AI and smart systems will increasingly have a profound impact on the way all of us, around the globe, will live our lives. And, it will take scientists, industrialists, humanists, and entrepreneurs to exchange ideas, form collaborations, and find solutions.

Southern California universities graduate more computer scientists and engineers than any other location in the country, only behind New York and Silicon Valley. Orange County's leading research institution, University of California, Irvine (UCI), produces many of the necessary scientists and entrepreneurs in artificial intelligence to meet the demand for AI educated employees.

Whether it's the Donald Bren School of Information and Computer Sciences — the only independent school

focused solely on the computer and information sciences in the UC system, with its Center for Machine Learning and Intelligent Systems, or the School of Social Sciences Cognitive Sciences — there is research focused on harnessing the vast amounts of digital data available and then using this data in an intelligent way to solve a variety of real-world problems. Or you can turn to UCI's Institute for Future Health and the UCI Center for Artificial Intelligence in Diagnostic Medicine which are using technology to disrupt the healthcare industry.

Artificial intelligence reaches into virtually all aspects of our lives. The Institute for UCI Virtual Environments and Computer Games uses multidisciplinary projects encompassing the fields of anthropology, art, computer science, engineering, history, medicine, and psychology to understand and create technology and applications that transform how we see the world.

With all its intellectual capital and emerging talent, UCI ranks in the top 20 among U.S. universities in computer science and fourth in human-computer interaction or artificial intelligence.

"With our School of Information and Computer Sciences generating 33% of all AI Ph.D.'s in SoCal, Irvine is at the center of producing tomorrow's technology leaders and cutting-edge AI that will improve lives and power the economy," said Richard Sudek, Ph.D., executive director of UCI Beall Applied Innovation and chief innovation officer at UCI.

The industries that rely on AI and technology leaders — including healthcare, cybersecurity, data, financial-tech, legal, and real estate, to name just a few — all thrive across the landscape of Southern California, particularly in Irvine.

A roadmap has been created to help convene key organizations across the Southern California technology and medical technology ecosystem, including the engagement of Octane and several of their partner universities such as UC Irvine and Chapman University, healthcare firms and organizations such as Allergan, Medtronic, and technology companies such as Alteryx, Experian, SAP, and Veritone, and several legal firms. An important strategic partner is FivePoint, developer of the Orange County Great Park that will serve as an innovation hub for AI and emerging technologies.

Stuart McClure, founder and president/CEO of Cylance — the cybersecurity company that revolutionized the way the industry detects and protects endpoints using mathematics and machine learning

(ML) — and who later led BlackBerry Cylance (named to reflect the acquisition), has a long history of visionary leadership in new tech in Orange County. Since his first venture-backed startup, Foundstone, launched in 1999, he has recognized that Orange County is a center of activity for cybersecurity innovation and entrepreneurship.

"In the early 2010s, to stay ahead of the bad guys, our industry moved to AI and machine learning as the only viable solution to predict and prevent cyberattacks. And from this, Orange County has come alive as a global hotbed of AI/ML, which will only be applied to more and more global problems to reduce suffering around the world," McClure has said.

Perhaps the most topical cybersecurity issues are indeed related to artificial intelligence.

The UCI Cybersecurity Policy & Research Institute, a unique, multidisciplinary effort, brings together academia, a broad range of critical infrastructure businesses, law enforcement and other government agencies, and the privacy and civil liberties community in a unified effort to combat cyber threats.

But the research is only part of the story.

Entrepreneurs, such as McClure, have made Irvine and Orange County the success it is today and firms like CrowdStrike, Lantronix, and Enterprise Data Solutions, help advance the technology that started in a lab.

In the past year, 50 companies graduated and either raised or are in the process of raising capital from Octane's LaunchPad accelerator, including 21 related to AI, with the latest being: TrackStreet and Grok focused on cybersecurity, IoT app Conectric Networks, Advice Analytics, a FinTech company focused on retirement plan compliance, and two startups focused on agriculture, AgTools and GroGuru. Another 19 are working on COVID-related solutions.

At UCI Beall Applied Innovation, two of their Wayfinder startups have achieved momentum and success in the AI field. The first one, Docbot, is a healthcare software that captures advanced patient data during care. The startup uses an artificial intelligence-enabled platform to identify colon polyps in real time. Last year, Docbot received \$2.045 million in seed funding from investors BOLD Capital Partners Collaborative Fund, Fenox Venture Capital Khosla, and Lightbridge Ventures, as well as three angel investors. Additionally, Docbot won a National Science



Irvine is home to more than 900 tech companies and is a leading AI hub.

Foundation Small Business Innovation grant of \$225,000 and indicated they will use both of the considerable funds to support several clinical trials, mainly focused on polyp detection.

The other startup, Wing, is a personal assistant app that uses artificial intelligence technology and real people to take care of everything from the small tasks, like ordering groceries or an Uber ride to the more important errands, such as booking a last-minute flight. The team has grown since 2018 and in February, the team relaunched its product on Product Hunt, a website that features the latest apps, websites, hardware projects and tech creations. The site ranked the Wing app number one 'Product Hunt of the Day' globally.

Wing also answered the COVID-19 call for help and worked with John Muir Health Group, located in the Bay Area, and Kaiser Permanente offices based in the mid-Atlantic region to offer medical professionals 30 days of free service, which included popular requests like scheduling appointments, grocery shopping, and finding childcare.

Capital continues to be a challenge for Orange County-based companies and the small quantity of locally headquartered venture capitalists highlights the challenge. While local capital accelerators continue to bring capital into the region from innovation centers such

as Boston, New York, and the Bay Area, the lack of local capital restrains early companies from the critical funding they need. Last year, Octane brought into the region \$352 million in capital. The OC Master Fund is working to increase access to capital and firms such as Ankona, Miramar, Okapi, and Visionary Ventures have grown and raised new funds over the past year. At the same time, they only produce a small percentage of capital needed for the innovation occurring in our community. Many new efforts are in place to attract capital and Octane will soon be announcing a new initiative to attract Series A capital for companies coming out of their LaunchPad Accelerator.

A critical component is to collectively increase the number of new companies that start, successfully raise capital, and grow in Orange County. The foundation to accomplish this and the speed of execution is dependent on the many components of the ecosystem to work together and come alive. To this end, Octane is hosting several programs to support tech, MedTech, AI, and other related Orange County and Irvine ecosystems, including its digitally-presented Ophthalmology Technology Summit in August, and its Technology Innovation Forum in September that will feature a specific focus on data, FinTech, and cybersecurity with AI cutting across all three.

In October, Octane and its partners including the Greater Irvine Chamber will highlight AI at its Medical Technology Innovation Forum and how AI is changing the patient experience and the speed in which companies can commercialize innovative ideas to reach those patients.

Orange County will also be the home for the global AI for Good Conference in the fall of 2021. This has been made possible by the work of Senator Joe Dunn, Neil Sahota, chief innovation officer at UCI School of Law, and Lucy Dunn, president and CEO of Orange County Business Council, working with the community and United Nations, who is the host.

All of this collaboration, sharing, and developing expertise is vital to collectively demonstrate the reasons all the diverse resources that exist across Southern California can provide the platform to create and grow AI-based technologies and applications locally.

One last point, while AI is a term being used at the moment, keep in mind that emerging tech is the headline and if history repeats itself, we know this sector will continue to expand with Orange County and Southern California playing the most significant role.

The Greater Irvine Chamber, along with its coalition partners, stands committed to serving and helping expand Irvine's technology ecosystem. ●

Leaders Circle

THE ELITE MEMBERSHIP GROUP OF THE GREATER IRVINE CHAMBER

DIAMOND

City of Hope

ORANGE COUNTY

PLATINUM

30th ANTI

hoag

MemorialCare

GOLD

FIVEPOINT

UC Irvine

COX

Google Fiber

octane

IRVINE COMPANY

Allergan

Edwards Lifesciences

SILVER

Kaiser Permanente

EDISON

GDR Group

IRVINE AUTO CENTER

Parker Aerospace

WM

WELLS FARGO

ZILLOW GROUP

BRONZE

CBE

Chevron

CONCORDIA UNIVERSITY IRVINE

Hoag Orthopedic Institute

GREATER NEWPORT PHYSICIANS

Jackson Tidos

KBB.COM

HORIZON CONSUMER SERVICE

OCTA

SoCalGas

BIBRAUN

DIAMOND DJ JAMBOREE

easterseals

HLBA

INCRAMI

OmniPrint

PACIFIC WESTERN BANK

ROSE HILLS

Transportation Center Agencies

UPS

WNDE

To learn how you can support the leading economic advocate for the business community, contact Dink Tao at dtao@irvinechamber.com or (949) 502-4114.

Irvine Hotel Partners fueling Irvine's economic vitality

AC HOTELS

ATRIUM hotel

CANDLEWOOD

COURTYARD

DOUBLETREE

EMERALD SUITES

extended STAY AMERICA

Hampton

Hilton

Hilton Garden Inn

HOMESWOOD SUITES

HOTEL IRVINE

HYATT house

LAQUINTA

MARRIOTT

Residence INN

SONESTA

SPRINGHILL SUITES

STAYBRIDGE SUITES