CAL STATE
EAST BAY

CHANGING THE LANDSCAPE OF LEARNING

PROFESSIONAL ONLINE LEARNING TO TRANSFORM YOUR LIFE

Cal State East Bay Big Data Certificate Program

You aspire to stand out from the others. You aim to be better and more valuable than your competition. Reaching this level of dexterity may have seemed out of your grasp. Until now.

Your own pace in your own space

Enjoy the benefits of online learning. Create your own schedule and complete the course at your convenience.

During the 8-module Big Data Certificate Program, you'll solve real-world challenges and use best practices developed by top companies. Big Data experts guide you through every step of your journey. Build your toolset and develop your unique, personalized Big Data Portfolio.

Industry leaders, professionals & educational experts

Gain direct access to the world-renowned faculty – industry leaders who practice the art of Big Data every day. Learn more about our exceptional faculty at **execed.ce.csueastbay.edu.**

Online learning benefits

- Absorb at your own pace
- Easily fits into your busy schedule
- Relax in your own environment
- Replay video presentations
- Review materials as often as needed
- Partake in subject discussions
- Download course templates to share

Register at execed.ce.csueastbay.edu

510-925-1771

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PROGRAM SUMMARY

No other program delivers like Cal State East Bay. You're broken away from the daily routine; immerse yourself in real-life challenges, expert thought leadership, strategy sessions, innovation frameworks, and big data cultures. Learn more details about the online Big Data Certificate Program at Cal State East Bay, including takeaways and learning objectives, at **execed.ce.csueastbay.edu.**

MODULE 1: THE FOUNDATION OF LEARNING BIG DATA

Learn why big data is critical from a competitive standpoint in today's economy. Focus on the market outlook and core characteristics of what to sell the C-suite to gain support for a solution implementation of a strategy.

- Discover the characteristics of big data and the 4 V's (Volume, Velocity, Variety, Veracity).
- Understand the future of big data with machine learning and artificial intelligence.
- Identify implementation challenges; infrastructure, analytics platforms, data security, qualified resources.
- Learn about stakeholder buy-in and compliance, and how to get the C-Suite to agree with a strategy.

MODULE 2 (PART 1): BIG DATA INFRASTRUCTURE OPTIONS

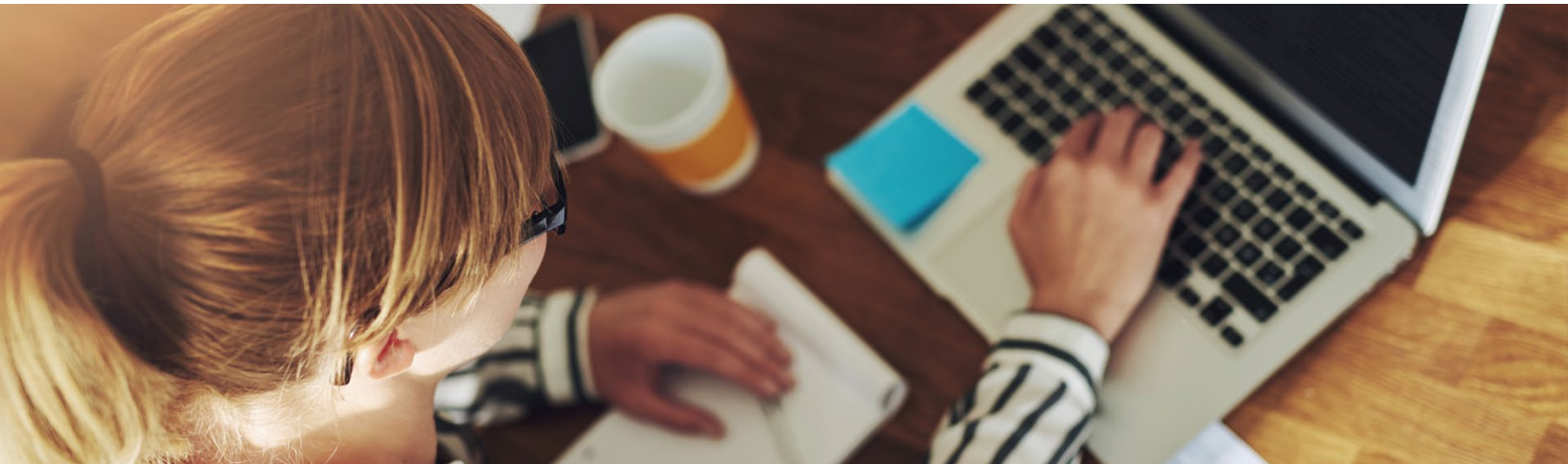
Develop a solid understanding of infrastructure to create solutions with a well-constructed architecture, offering either an on-premise, hosted, or cloud-based strategy.

- Uncover the 5 key components; collection, storage, processing power, analysis, visualization/output.
- Analyze the advantages of on-premise vs. hosted vs. cloud solutions.
- Review a case study in infrastructure options – how the world's largest tech provider creates big data solutions.

MODULE 2 (PART 2): IDENTIFYING & SELECTING THE RIGHT RESOURCES FOR BIG DATA

Create a plan to implement infrastructure, analysis strategy and security while developing the right team. Learn how one company builds their big data operation around some of the best resources available in the market.

- Examine the difference between management training vs. technical training.
- Learn how critical it is to have the "right" team to manage your solution, and the roles needed to do it.
- Identify resource requirements for a successful solution, spot the fakers, and prevent possible disasters.
- Review a case study in resource selection – how one company selects the best resources for their operation.



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MODULE 3: DATA ANALYTICS PLATFORMS, TOOLS OF THE INDUSTRY & HOW TO USE THEM

Develop a strategy to analyze the structured and unstructured data to produce business value. Discover how to analyze the data, and what analytical models and commercial solutions are available for leverage.

- Understand the difference between big data analysis and business intelligence.
- Learn the types of tools needed including Hadoop, NoSQL and SQL.
- Identify analytical models including collection, analysis, visualization, integration, and development.
- Uncover analytics solutions including Qlik, Tableau, Splunk and Microsoft BI.

MODULE 4: MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & BIG DATA ANALYTICS FOR FUTURE OPERATIONS

Review predictive analytical models and uncover how artificial intelligence and machine learning will be critical to sustain a competitive advantage by analyzing data faster and leveraging the data for a decision support system.

- Expose the future operations of machine learning, artificial intelligence and big data analytics.
- Discover what artificial intelligence and machine learning are and how they are constructed.
- Learn how artificial intelligence and machine learning are used and their future holds.

MODULE 5: CODING WORKSHOP & VISUALIZATION

Upon completion of the analytics and machine learning modules, you'll take a hands-on approach and dive deeper into various coding languages that support big data. Review various applications to write, compile and test the code based on different case studies.

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PROGRAM SUMMARY

MODULE 6: BIG DATA SECURITY

Analysts estimate data breaches will cost companies a global annual cost of more than $2.5 trillion by 2022. Learn why protecting your data and preventing data breaches is critical for corporate survival.

- Understand the role of data analytics in projecting staffing needs of an organization.
- Identify critical financial models using time series regression techniques and statistical classifiers.
- Discover the current challenges in security, the models for the challenges, and the future.
- Review a case study in securing a global company – prevention attempts and the aftermath of a breach.

MODULE 7: ETL METHODOLOGIES & STRATEGY

Uncover the best practices for reviewing system architectures, defining the relevant data between systems, creating a process mapping with keys, combining the data into a common platform, and visualization strategies.

- Review a custom case to identify system landscape.
- Create a process mapping and define data keys to build relationship.
- Identify aggregation models and visualization strategies.

MODULE 8: STRATEGY

Develop the tactics to communicate persuasively and convince the C-suite of the value proposition of a well-structured big data solution.

- Build a big data proposal.
- Understand cost implications for a big data solution, the cost for not implementing, and valuating the ROI.
- Discover how long it take to implement a big data solution and when to expect results.
- Sell it to the CEO – show them the pot of gold.

Lead the Big Data Movement with Your Certificate from Cal State East Bay

Your Cal State East Bay Big Data Certificate provides you the differentiating factor. It proves that you have completed all modules, as well as the cumulative Capstone Project. You'll walk away with confidence and your own, professional Big Data Portfolio.

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FACULTY & LEADERSHIP

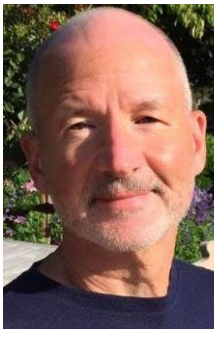
The Cal State East Bay leadership team sets us apart. Our distinguished faculty and leadership is comprised of industry leaders, professionals and educational experts. View the complete bios of our Faculty and Leadership Board, at **execed.ce.csueastbay.edu.**

PAUL SZYARTO

Paul is the founder of PS Group Holdings and is directly involved with over 400 enterprise wide projects throughout the world, focusing on ERP, PPM, and integration solutions. He focuses on helping with implementation of data management solutions, and has been part of more than 60 SAP deployments over a six year period.

ANTONIO ZURLO

Antonio is a Principle Technical Business Developer with Amazon Web Services, and previous to that, he worked with Microsoft, IBM and Goldman Sachs. He focuses on working in the computer software industry where he excels in big data, enterprise software, PaaS, enterprise architecture, and agile methodologies.

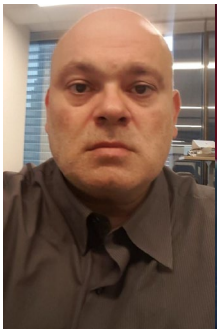


TED HRUZD

Ted is an architect and engineer with extensive experience optimizing trading applications for a competitive advantage. He teaches ULL Architectures for Electronic Trading and Algo Trading at NYU. He's an avid athlete and developed a ML software to accurately guide training to lead to aggressive fitness and sports related goals.

STEPHAN DICKINSON

As a Big Data Product Manager with a focus on Hadoop and HDFS, Stephan has 14 yrs of enterprise project management experience, and over 20 in the tech field. At the School of Visual Arts, he designed, budgeted, architected, and deployed SVA Computer Art's render farm. Stephan also enjoys teaching batch scripting and programming.



DINO VITALE

Dino focuses on large scale infrastructure design, performance tuning, and managing technical specialists, as well as evaluating ROI integration of acceleration technologies and financial product knowledge of equity/fixed income derivatives. He is a Senior Cloud Solutions Architect with TD Securities and enjoys speaking among industry.

JOHN NIVES

As an Operating Partner with Gridiron Capital, John focuses on Digital and AI Transformation firmwide. Previously with IBM, he was a consultative sales leader for Watson Marketing and Analytics with a team that resulted in $100M+ in growth. He also worked with AT&T where he led the explosive growth of an advertising technology venture.

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YOUR NEXT STEP

LEARN
CREATE
IMMERSE
REFLECT
CHALLENGE
GROW
IMPLEMENT
LEAD
DRIVE
STRATEGIZE
MOTIVATE
INSPIRE

Attend Cal State East Bay online learning to generate new ideas, start conversations, and develop solutions to help your company lead the industry and become more profitable.

Contact us to learn how you can begin your journey with the Cal State East Bay Big Data Certificate Program today!

CALL US TODAY
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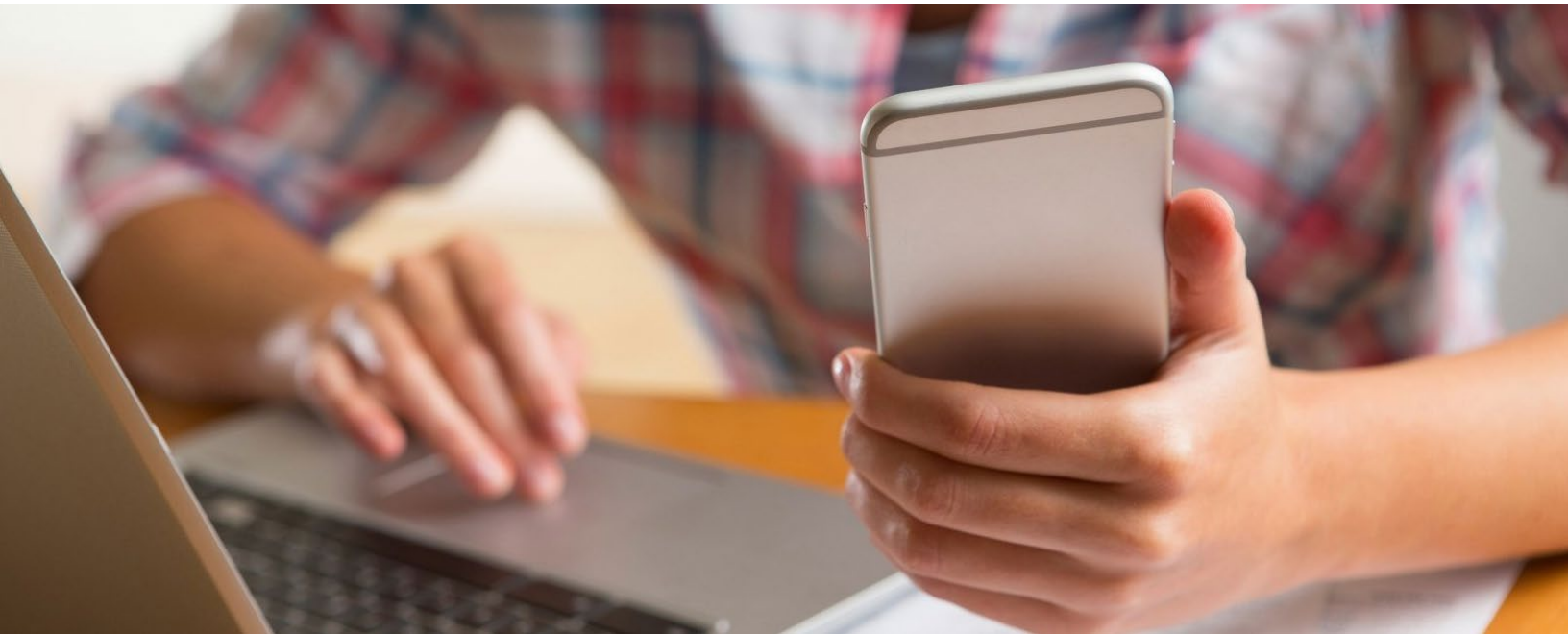

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Brought to you by Zschool

You learn how to focus on bringing innovative concepts to life when you step into the future of executive education with Zschool. Traditional learning approaches don't capture the interdisciplinary demands of today's executives. That's where the difference of Zschool comes in.

The Zschool Difference

Our programs are for professionals who desire advancement the ability to reach their goals. Courses typically combine several different fields of study and offer you unique opportunities to broaden and deepen your knowledge and skills. By combining the academic rigor of a university with the real world practicality of generating ROI, our enriched programs cast you into real-world situations. You develop strategies and roadmaps and make complicated decisions applicable to your own work environment.

In addition to role-playing and simulations, you create your own executive portfolio with customized templates that you can use immediately in your workplace. You complete a Capstone Project designed to apply your knowledge and reinforce what you've learned throughout the program.

Z school

Executive Education Expert

Zschool's network of executive education experts are also industry leaders in their field. They consult to many of the world's top universities. They provide strategic guidance and advice to leading corporations on cutting-edge topics relevant to business growth. As expert coaches, they lead you step-by-step through the complicated maze of new frameworks, strategy models, and innovative design concepts.

Helping your business achieve the Next Level

Zschool can work with your staff to design curriculum unique to your organizational needs. From building industry specific case studies to developing customized in-house training programs. Learn how your company would benefit from the world-class Executive Education offerings provided by Zschool.

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