Center for Information Technology and Business Analytics
Department of Information Systems and Decision Science
Mihaylo College of Business and Economics
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CALIFORNIA STATE UNIVERSITY FULLERTON

CENTER FOR INFORMATION TECHNOLOGY AND BUSINESS ANALYTICS

Center Self-Study
From March 2013-April 2016

Director: Rahul Bhaskar, Ph.D.
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Background

The Department of Information Systems & Decision Sciences offers several courses in Information Technology, Decision Sciences and Business Analytics as part of its undergraduate and graduate curricula. In most of these courses, we offer business students a limited amount of hands-on training as part of their class instructions. In these challenging times, industries in California are increasingly utilizing information technology and business analytics to improve their cost structure. Given the vast challenges that organizations face in these dynamic and competitive times, there is a need for experienced workers in these fields. It is imperative that our students are exposed analytical real world problems and the ability to provide technology, organizational and process solutions before they graduate so that they can go to the job market well prepared to fulfill their employer's expectations.

There is a need to develop an Information Technology and Business Analytics curriculum within the College and that generates external experiential opportunities so that students will have the opportunity to improve their capabilities in these fields. Through experiences in and out of the classroom, students develop the habit of intellectual inquiry, prepare for challenging professions, strengthen relationships to their communities and contribute productively to society. The Center for Information Technology and Business Analytics strives to address that need.

Mission Statement

The Center for Information Technology and Business Analytics strives to provide technological and analytics education to students, faculty at CSUF, and other educational institutions. The Center aspires to be a leading source of cutting edge technology education and innovation for current and future analysts and managers globally.

Goal and Activities

To ensure that the students are exposed to the cutting – edge technology education, CITBA uses the expertise of the all stakeholders in the field of Analytics including: The Dean and Faculty of College of Business; Analytical software companies; and Professionals using Analytics in companies like Heath Care and Sports Industry.

To provide students with an experience in solving analytical real world problems and the ability to provide technology, organizational and process solution to the local companies. CITBA has strived to strengthen our relationships with local companies and worked to provide opportunities for students to complete internships. Our students have been mentored by the CITBA faculty and some of our students have successfully turned their internships into job opportunities.

To expand connections and partnerships with our internal and external community, CITBA uses the expertise and diversity of the faculty in our department. We strive though these

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partnerships to be a Center of activity essential to the intellectual, cultural, and economic development of our region.

These goals are aligned with the mission of the CSUF to provide high quality programs that integrate advances in informational technology to meet the evolving needs of our students, community, and region. The center also serves as a regional center for intellectual learning activities, one of the goals of CSUF. Also, these goals integrate into the MCBE mission to produce globally aware business leaders through innovative teaching. The following activities showcase what the Center has accomplished in the review period.

Goal: To ensure that the students are exposed to the cutting – edge technology education.

Activities: Workshops

CITBA has provided training in the use of Information Technology and Business Analytics tools and software which can foster research, scholarly, and creative activity among our staff, faculty and students. Over the review period the training workshops have been offered by industry professionals in the cutting edge analytical and software tools and skills. These included Cloudera, Qlikview, Tableau and reoccurring SAS training workshops have been offered on our campus to allow students to be able to start the process of SAS certification.

Activities: Health Care Analytics certification

The CITBA members have worked to setup a certification in Health Care Analytics certification program through the extended education program. The first cohort enrolled in March 2016. This certification will help students to be exposed to role of Analytics in the medical field.

Activities: Faculty Training sessions for Students

Faculty have held training sessions to apply knowledge in the cutting edge fields of Big Data and text mining to real world problems. Help and encourage students to complete SAS certification to make them more marketable. This led to instating the first Business Analytics Club at California State University, Fullerton.

Activities: Set up a Computer Lab

CITBA and its sponsors have worked hard to provide an environment by setting up lab where students can come and use computers that have all the statistical analytical tool software to be able to use the facility and be able to complete group projects in collaborative teams.

Activities: Students attend Analytics Conference

CITBA has sponsored student participation in conferences including Tera Data University Network conference. Students competed and won first place for providing an Analytics solution for the problem that was presented.

Goal - To provide students with an experience in solving analytical real world problems and the ability to provide technology, organizational and process solution to the local companies.

Activities - Seminars

CITBA has brought senior professionals from the industry to conduct seminars to give students an inside view of the applications and the type of jobs that the field of Business Analytics has to offer. The seminars included talks from senior executives of companies including Kaiser Permanente; Los Angeles Dodgers; Memorial Health care.

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Students interacted with these industry leaders to identify the needs of the company and the specific skills that employers are looking for. These seminars give our students the motivation to learn the new technologies that will give them the competitive edge in the field.

CITBA also invited Epsilon and SAS to our campus in an effort to understand the directions of the market. During their visits, Epsilon and SAS advocated for a comprehensive curriculum in understanding the importance of business analytics. In addition, Epsilon stressed the emergence of Marketing, Information Systems, and Business Analytics. Their visits provided us with invaluable insights and satisfied the curiosity of our students and faculty alike.

Goal - To expand connections and partnerships with our internal and external community

Activities: Consulting Services

CITBA has provided specialized consulting services to the Southern California companies looking for Business Analytics solutions for their ability to achieve high performance in today's shifting, competitive business landscape. Through these efforts, CITBA has helped organizations make fact based decisions based on meaningful data using Business Analytic solutions. These organizations have included Health care companies.

Activities: Foster interaction between the Center and our students

CITBA would thrive to be a community-first Center. One of the most important aspect of our University is the closeness between the faculty and our students. To foster interaction CITBA led the effort to establish a Business Analytics Club that meets every Saturday and provides an avenue for the young people to peer teach technologies that are not available as classes in the department of ISDS.

Organizational Structure and Governance

The Center is led by the director Dr. Rahul Bhaskar. The director ensures that the activities that are approved by the board for the center are executed. The director is assisted in this by his assistant director, Dr. Sanjini Mitra and Staff, Ms. Sarah Radcliffe.   The advisory board has numerous responsibilities:

- Provide a strategic direction to the Center.
- Analyze scope of the projects undertaken to ensure their alignment with the operational goals of the Center.
- Work on ongoing bases, to repurpose the operational goals, and to align with the needs of the organization in the region.
- To generate leads for external private support and research grants and contracts.
- Act as a reference and experts for the members in their respective industries.
- Mentor students and act as their reference for employment.
- Provide hardware/ software and sample databases for hands-on experience.

The core of the Center is formed by the Members, which in May 2016 comprised of four professors from the department of ISDS. The Advisory Board consists of external advisors who provide strategic advice to the core group and connections to key external organizations.

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Resources and Sustainability

The Director, Dr. Rahul Bhaskar, has managed CITBA from his office, SGMH 4170. The center director is actively supported by Dr. Bhushan Kapoor and Dr. Sanjini Mitra. Sarah Radcliffe is the administrative support staff that actively works with center director to organize, and advertise the seminars and workshops

The center has been supported by grants from the College of Business and revenue from SAS workshops. In addition, the center also received the support from the CSUF Department of Information Technology. The funds were dispersed to produce marketing materials, purchase equipment to setup the computer lab, and provide remuneration to professionals that present the seminars and to run the seminars and workshops. The center is operationally supported by Sarah Radcliffe.

The Center has been able to provide the value to our study body as evidenced by numerous student placements in the field of Analytics in local companies for internships and jobs.

Although some revenue is generated by workshops, the center needs continued support from the College of Business to enable the center to accomplish its goals

Center has received revenue by charging attendees for workshops, grant from the school of business, and pro bono services by information technology vendors. It remains sustainable as the training activities organized by the IT Company are pro bono with all the needed material and food etc. provided by the IT Company. In cases, the IT Company does not provide the funding, it is provided by the nominal fees charged from the participants.

Planning and Strategic Outlook

Elaborate on future strategic plan to develop a SAS certification. Also, provide specifics on the Business Analytics Computer Lab. Discuss any future plans regarding the aspiration to expand CITBA operations (i.e., offer new /certificates). Finally, address the Center's ability to achieve its objectives in the coming years and suggest possible solutions. Will expected resources be sufficient to achieve stated goals?

The CITBA governance, the students of the Analytics club and the advisory board come together to identify needs for the upcoming year. Once the needs are identified, the requisite companies are approached to see availability. Seminars and workshops are announced and advertised via available forums including Twitter and campus resources. CITBA has a dedicated website that supports the center. (The website is being updated to reflect new accomplishments). A dedicated administrative (50%) helps in the formal planning process of CITBA goals.

Goals for Upcoming Three Years

1- We plan to develop a SAS certification program in collaboration with the SAS Academic outreach and CSUF extended education. To accomplish this we will identify the courses that the department can offer that will complement the completion

2- Support student participation in Analytics conferences increasing their exposure to the cutting edge skills and tools in the field of Business Analytics.

3- The Business Analytics Computer Lab will be a liaison between the industry and academia in analyzing big data for industry purposes, while giving the students the opportunity to practice with real data and real world problem. This hands-on approach would increase our industry exposure while serving all three entities, our colleges, our students, and our local businesses. We would charge a nominal fee for local business that is in need to get their data analyzed. The center has accomplished this with small projects from a couple of companies but looks forward to increasing this interaction with the industry.

4- Expand CITBA operation beyond the scope of education. Besides offering analytics workshops, CITBA would like to establish an Information Intelligence Lab to bring in other revenue streams from local companies and assist them with their data analytics needs.

The current funding of CITBA has helped us establish the lab with computers that can handle big data. We need additional personnel when conducting market research, scientific research, and data analysis. The center will work to establish a process and funding to use the Lab to provide solutions for industry need for analytics.

The establishment of SAS certification would require capital. Since SAS would not be able to assist CITBA with instructors and materials if the classes consist of professionals, CITBA will be solely responsible to set up the entire program. Major costs would include hiring instructors, purchasing materials, and administrative costs. In total, both plans would need $50,000 in funding.

Viability

At this moment, no activities from CITBA would be terminated. CITBA will continue to increase its exposure and reach among the community. While SAS workshop is proven, CITBA would want to venture into other business and venues that can help sustain CITBA financially and provide excellence service to the community

Summary

Since the inception in March 2012, CITBA has offered beneficial services while abiding to its mission and goals. With additional funding, CITBA has been able to expand its operation and offer even more high impact services for our community, our university, and our students. The continued support of the center will helps us sustain and expand our offerings to our community.

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Appendix

Highlights and Accomplishments

Engage	Innovative practices/activities	Impact
Workshops	**Epsilon Workshop on Information Technological advances, industrial best practices, and Analytics** *Vice President Marketing and Analytics at Epsilon*. **SAS Workshop Enterprise Minor & Text Mining** *Mike Speed, Liaison Senior Director, Global Academic Programs and Global Certification* **Tableau Workshop** **Presented By Jason Schumacher** *Director, Education Outreach Tableau Inc.* **Qlik Sense workshop (on popular demand by students has been arranged the second time)** *James Hartshorne; Alfonso Franklin and Jennifer Moore*	**The students and Faculty were exposed the market trends and were trained in the use of Business and Marketing Analytical tools for marketing. This has helped to make our students more employable. These workshops have helped to motivate and ensure student engagement in the field.**
SEMINARS	**Sports Analytics Seminar** **Presented by Eric Hernandez** *Vice President Finance* *Los Angeles Dodgers* **Healthcare Analytics Seminar** *Presented by Dan Exley* *Memorial Health Care*	**The students and faculty were able to interact with Senior executives to see the application of Business analytics in various domains.** **Exposure to senior executive vision of marketing analytics in various domains has helped to gain a firsthand insight into the future if their choice.**

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ESTABLISHED FACILITY	**Established Computer Lab** **Main University Library** *In collaboration with CSUF- IT and MCBE* **Saturday Workshops** *ISDS Faculty* **Established Business Analytics Club** *ISDS Faculty*	**The students have access to a computer lab during the semester can come and use computers that have all the statistical analytical tool software installed to be able to complete group projects in collaborative teams.** **Supported MBA students using mock interviews, ongoing consulting and mentorship, to obtain employment in Analytics with companies that include Ingram Micro, Kaiser Permanente, and Memorial Health Care.** **Students have been placed in the Industry due to contacts generated by CITBA.**
HEALTH ANALYTICS CERTIFICATION	**Collaborated with Extended Education to start the Health care Analytics Certification.** *ISDS Faculty; Executive Director Memorial Health Care*	**The HCA certification will provide students with the knowledge and expertise to fulfil the niche that has been created by the affordable Health Care Act.**
STUDENTS ATTEND CONFERENCE	**Hosted students at the Teradata University Network conference. Students won first place in competition held during the conference.** *Tera Data Inc.*	**Competing in Analytical conferences encourages students to pursue the field. It also gives them a competitive edge in the job market.**

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Finances

Source	Impact
Grants from the school of business	**Computer Lab Setup** **Gifts for speakers, Reference books for analytics club**
Registration for Seminars	**Organized student attendance to Tera Data Network Conference** **Organized food that accompanied workshops**