

Salar Jahedi Senior Economist Core AI / Central Economics, Amazon email: sjahedi@amazon.com

Tel: 1-510-847-0865

September 30, 2018

Raja Kali
Professor and Department Chair, Economics
Conoco Phillips Chair in International Economics and Business
Sam M. Walton College of Business
University of Arkansas
Fayetteville, AR 72701

Dear Professor Kali:

I am writing in support of the new program: Master of Science in Economic Analytics.

Over the last decade, the quantity, diversity, and richness of digital information has grown exponentially. This allows researchers to take a data-driven approach to studying questions that have historically been elusive. In response to rich data, new statistical techniques are blossoming, that leverage technological advances in data processing and transfer speeds, to more efficiently span large datasets and generate key insights. It should be noted that Economists have been especially successful in utilizing these techniques and being impactful in business, in part due to the strong economic framework used to model questions as well as their strong background in econometrics.

I have experience working across academia, government, and industry. The demand for workers that will be able to use and draw insights from datasets of the future is endless. The Master of Science in Economic Analytics will be an intensive program that provides students with exactly such skills, and bring the local, city, and State closer to utilizing the associated benefits.

Sincerely,

Salar Jahedi

Senior Economist, Amazon

Jalar John

Affiliate Professor of Economics, University of Washington



October 2, 2018

Michael A. Brown Principal U.S. Economist Visa Business and Economic Insights

Dr. Raja Kali Professor and Department Chair, Economics Conoco Phillips Chair in International Economics and Business Sam M. Walton College of Business University of Arkansas Fayetteville, AR 72701

Professor Kali,

I am writing today to express my support for the proposed Master of Science in Economic Analytics program.

Having served as an applied business economist in both the public and private sector, I find the proposed curriculum to be extremely relevant to those students who seek to become professional economists, public policy analysts or applied data scientists. The curriculum is designed in such a way that the skills obtained could be used for a wide range of positions within a firm and will serve students throughout their professional careers.

The skills students will obtain in the proposed program will be critical to serving a growing need for individuals with a solid understanding of how to leverage public economic data to tell a story about the current state of the U.S. economy. The particular focus of the program on data-analytics should also help to serve a growing need for firms who wish to leverage their internal data in order to understand trends in their industries. The fact that this program is occurring within an economics program provides an even greater value-add as these students will have the capability to not only analyze this internal data but also understand how trends in the data fit into the overall macroeconomic backdrop in which the firm is operating.

I look forward to seeing this new degree program implemented to serve this large and growing need.

Sincerely,

Michael A. Brown

Principal U.S. Economist

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From: Salido, Fernando

Sent: Tuesday, October 02, 2018 5:00 PM

To: Galland, Mindi

Subject: U of A Recommendation Letter

Dear Professor Raja Kali, University of Arkansas Department Chair, Economics:

I am writing to strongly support the proposed Master of Science in Economic Analytics program at the University of Arkansas.

As you described the program, "The Master of Science in Economic Analytics will be a 10-month intensive program that will guide students through economic modeling and theory to computational practice and cutting-edge tools, providing a thorough training in predictive, descriptive, and prescriptive analytics. Students will be armed with a solid knowledge of econometric and machine learning methods, optimization, and computing. The goal is that these skills, combined with knowledge of economic modeling, will enable them to identify, assess, and seize the opportunity for data-driven value creation in the private and public sector."

As the executive vice president of Shopper Analytics, Consumer and Shopper Marketing for IRI, a multibillion dollar global technology and media firm headquartered in Chicago, I can affirm that we are increasingly seeking candidates with the next generation of advanced analytic competencies that you describe in your program. In fact, operating in today's world of expanding petabytes and data lakes, it is imperative that we hire data engineers and scientists with practical economic and business skills to enable our CPG, media, and retail clients to quickly make fact-based decisions from relevant insights and recommendations. What's more, our industry is quickly evolving to a world of augmented decision-making, whereby we are developing AI-driven algorithms and automated business signals to assist clients with proactive decision-making tools. There have never been greater opportunities for graduating data scientists than today.

For over 30 years, IRI has been a leading provider of retail and CPG market performance data, shopper insights and activation, advance analytics and technology, ecommerce and retail-supplier collaboration programs. We globally track over \$2 trillion dollars in annual retail sales with over 3,500 clients and 750 retailers worldwide. Thirty years ago, tracking 100,000 US consumer panelists was big data. Today, we process over 200 million anonymized shoppers' purchase data across dozens of retail channels, representing over 80 million US households. Every day, we integrate and harmonize scores of disparate data sets, from ecommerce shopping trips and brick and mortar retail sales to weather forecasts and economic indicators. We store over 10 trillion rows of data and growing.

So, how do we make sense of all of this information? By hiring the best data engineers, scientists, and analysts with critical-thinking and requisite business skills to prepare, investigate and deliver actionable recommendations that help our manufacturers, retailers, and media clients grow their businesses. That is our mission—to help clients grow. Data scientists will be increasingly integral to fulfilling our mission.

Therefore, I believe that graduates from the U of A Master of Science in Economic Analytics program could be instrumental to the future success of our industry and companies like IRI. We look forward to working with you and the University of Arkansas. Please do not hesitate to contact me, if I can be of any assistance.

Sincerely,

Fernando Salido

EVP Shopper Analytics, IRI

609 SW 8th Street - Suite 555

Bentonville, AR 72712

(479) 268 - 7105



Fernando Salido

EVP, Shopper Analytics **C** +1 786.261.3327

P +1 479.268.7105

fernando.salido@IRIworldwide.com

Consumer & Shopper Marketing

609 SW 8th Street

- Suite 555

Bentonville, AR 72712

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150 North Clinton Street Chicago, IL 60661



Dr. Raja Kali Professor of Economics, Department Chair Sam M. Walton College of Business Fayetteville, AR 72701-1201

Dear Dr. Kali:

I am writing this letter to express my strong support for the proposed MS program in Economic Analytics. I work in a healthcare analytics position at Duke University Hospital and feel very strongly that this program will effectively prepare students to do the same.

Hospitals collect massive amounts of information and effective utilization of this information is necessary to remain competitive and financially solvent. The proposed coursework in SQL programming, Business Intelligence, and Python scripting combined with graduate economic coursework is a great foundation for understanding healthcare processes, asking great questions, and most importantly—successfully solving problems.

Please let me know if I can do anything to help with the implementation of this program.

Sincerely,

Jordan McInvale

Management Engineer - Performance Services

Duke University Hospital

Jordan Mc Inuale

621 N. 4th St. Rogers, Arkansas 72756

October 8, 2018

Professor Raja Kali Department of Economics Sam M. Walton Graduate School of Business University of Arkansas Fayerrville, Arkansas 72701

Dear Professor Kali,

Having been immersed in the business world and being employed as a data scientist or data engineer in some form or fashion for many years, I cannot express how timely the formation of this degree is. Companies of all sizes are increasingly aware of the need for sound data analytics capabilities and making data-driven decisions; but so often they do not know where to start. This program will not only produce graduates with the skills to enter into these organizations with the ability to undoubtedly add value to the company as a whole, but will enable those individuals to break through the barrier that seems to divide academia and the business world *per se* at above entry-level.

I am incredibly excited to see this happening at the University of Arkansas, an institution I hold dear to my heart. Further, I think that this will be an opportunity to supply the Northwest Arkansas with a much-needed intellectual resource that tends to be gravitating to more populous areas such as Silicon Valley and Seattle.

Please do not hesitate to reach out to me if I may contribute to the evolution of the program in anyway.

Sincerely

Justin Deloy LeBlanc, M.S., M.A., Ph.D.

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Director of Data Science

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October 3, 2018
Dr. Raja Kali
Professor and Department Chair, Economics
Conoco Phillips Chair in International Economics and Business
Sam M. Walton College of Business
University of Arkansas
Fayetteville, AR 72701

Dear Dr. Kali,

I am very glad to hear that the Department of Economics at University of Arkansas is proposing a new Master of Science in Economic Analytics program. I have read the proposal of the new program, and I wholeheartedly agree with the need stated in the proposal "The critical constraint is now the ability to analyze, digest, visualize, and ultimately harness the data to drive decision making in business, science, and society". I have experienced this very statement at J.B. Hunt Transport where I have been working for the past 6 years, and I believe this program will greatly help our company as well as other business entities by supplying talented students equipped with economic analytical skills.

J.B. Hunt Transport Services, Inc. is one of the largest supply chain solutions providers in North America. It currently ranked #395 on the Fortune 500 list. With the recent launch of J.B. Hunt 360 marketplace and platform, the company has become one of the leading digital supply chain solutions providers. The new platform is a revolutionary comprehensive solution powered by data science, economic analytics, engineering and cutting-edge technology. With that, the company has been in desperate need of great talents who are armed with a solid knowledge of econometric and machine learning methods, optimization and computing skills. The new program proposed by Department of Economics at University of Arkansas makes perfect sense in pursuing to seize these opportunities.

I support the establishment of this program, and I believe this initiative will become a great success.

Best regards,

J.B. HUNT

Ningning Zhuang
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Hello Professor Kali-

I am writing in strong support of the proposed MS degree program in Economic Analytics.

All fields are seeing a rapid adoption of statistical techniques, requiring programming familiarity and practical knowledge of advanced modeling, including classification and machine learning problems. While this is driven in part by competition --firms understandably desire the deep insight from data, using the most powerful tools-- it is also driven by risk management as firms move analytics out of spreadsheets and into code.

Economics strikes me as the ideal locus for a data science curriculum, given its rich analytical toolkit and general familiarity with data wrangling.

Please let me know how I can assist with implementation.

Sincerely,

Michael Cawthon

CIO, Green Street Energy

Toyota Financial Services 6565 Headquarters Drive Plano, TX 75024

Dear Dr. Kali,

I am writing to express my support of the Master of Science in Economic Analytics degree.

The demand for strong quantitative skills continues to rise, especially as firms gather and generate more data than ever before. A degree which is focused on practical methods of model estimation, analytical techniques, and programming prepares a graduate well for today's market.

Although training in econometric techniques is highly desirable, it is also crucial to develop sound problem solving skills. Economics provides not only quantitative tools, but also training in sound scientific reasoning. Wielding machine learning packages in open source software may be a nice skill, but without an understanding of the assumptions behind the model and where they can be applied appropriately, it is possible to arrive at erroneous conclusions. I believe the economics department is the perfect place for an applied analytical degree program.

Sincerely,

Jared Reber, Phd

Manager of Data Science, Toyota Financial Services