

BLACKCOFFER

INTELLIGENCE INNOVATION TECHNOLOGY

Statistics & Optimization with Big Data

Technology and data driven decision science company focused on helping academics to solve big data and analytics problems of any kind, from any source, at massive scale.

THE PROBLEM

- Can academia manage the challenges of broader collaboration and privacy to harness value from big data?
- ❖ For academia, and for many other sectors, big data looks like a new Eldorado: a fantastic mine of information where we hope to find the key to great discoveries. In the social sciences, for example, questions such as “what is social media data telling us about our societies?” or “how can big data be used to efficiently allocate resources, such as energy or capital?” are becoming more frequent.
- ❖ Quite naturally, academia is abuzz, thinking of how to best use big data. It is also teeming with competitiveness, as researchers race to make the discoveries waiting for us in those massive data centers.

THE CHANGING NATURE OF DATA

It is not the size of big data that requires so many different skills. In that sense, the term ‘big data’ is misleading. What makes big data different is the way the data is collected.

Traditionally data was collected for a specific purpose, relating to a specific scientific question. Academics sought to first delineate a scientific question, then build the most appropriate techniques to answer that question, and finally collect the appropriate data set to use the technique on. This systematic process led, hopefully, to an answer.

INTRODUCTION

UNDERSTAND

- ❖ Leading an organization in the 21st century requires vision technology and evidence based data driven decision-making. Blackcoffer team of analysts provide advanced analytic models of innovations to assist you in making optimal decisions, and data driven data-based insights to empower your findings to explore new research and innovations.

MISSION

- ❖ Blackcoffer provides experienced, professional statistical advice and analysis for the academic world. The goal of the practice is to assist researcher to better understand and visualize the world around them, based on an objective empirical analysis. Whether your project is a simple analysis, or requires the development of novel techniques, Blackcoffer can help.

SOLUTION

- ✓ Data Mining
- ✓ Statistical Modeling
- ✓ Data Visualization
- ✓ Text Analysis
- ✓ Machine Learning
- ✓ Artificial Intelligence
- ✓ Optimization
- ✓ Operations Research
- ✓ Financial Modeling
- ✓ Social Analytics
- ✓ Information Management
- ✓ Big Data

ANALYTICS



DATA ANALYSIS & STATISTICAL MODELING

- ❖ Providing statistical analysis for a wide range of data and study types. Whether your project is a multi-center double blind placebo controlled drug trial, a group randomized hierarchical study, or a simple cross-sectional survey, we have the statistical tools to assist you in understanding your results.

GRANT REVIEW

- ❖ Many times appealing the statistical reviewer is the difference between a grant receiving funding or not. We will make sure that your analysis plan is statistically correct, and addresses the hypotheses that you are interested in testing. We will review, discuss and edit your grant to ensure that the methodology, phrasing and terminology of your plan is correct.

ACADEMICS

STUDY DESIGN

- ❖ The design of your study determines its ability to answer your research questions, and affects every stage of your research. We will provide insight into your different design options, and how these options will affect the data analysis. We will also perform power analyses to determine sample sizes that are both practical, and give you the best chance to prove your hypotheses.

VISUALIZATION

- ❖ The impact of your work is determined in part by your ability to communicate your findings to your peers. We create publication quality statistical graphics that present your data in an understandable and intuitive manner.



BIG DATA

DATA ENGINEERING

- ❖ A critical component of operationalizing mathematical insight in an organization is the integration of statistical algorithms into traditional or non-traditional data stores. Our experienced team of data engineers have a deep understanding of both SQL based, and NoSQL based systems, as well as distributed computation paradigms.

STORAGE

- ❖ We interact with, design and provide DevOps for distributed storage clusters, with expertise in managing Hadoop, HBase, Cassandra, MongoDB, and others. Additionally, we create and manage complex data pipelines using modern architectures and components (Kafka, Storm, Spark Streaming, etc.). Cluster support can be provided on premise, remote or hosted.

DISTRIBUTED COMPUTATION

- ❖ Our data engineers understand how computation is done at scale and how to deploy statistical models into a complex distributed architecture. We work with Hadoop MapReduce, Spark and others to provide fault tolerant scalable computational platforms.

TOOLS



Google Chart



BIG DATA FUSION PLATFORMS

- ❖ Back-end infrastructure for integrating, managing, and securing data of any kind, from any source, at massive scale.

ANALYTICAL APPLICATIONS

- ❖ User interfaces that enable people to interact smoothly with data, ask better questions, and make better decisions.

FOR ANY BIG DATA PROBLEM

- ❖ Proven technology that can be deployed today, adapts to any domain, and produces operational results in weeks.

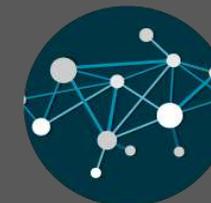
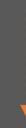
TOOLS



Data Collection



Data Analysis



Data Visualization



FOUNDER & CEO

Ajay Bidyarthi is instrumental in driving business, strategy and leadership. He has been instrumental for leadership, team building, strategy, sales strategy & growth, enterprise wide solutions and team leadership.

He has been key in growing the analytics and the technologies in information management, risk analytics, insurance analytics, case management, cyber security, capital markets, insider threats, intelligence and custom solutions for delivering the highest value and quality.

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CONTACT US

DATA SCIENTIST

Our data scientists provide insightful analyses for data both big and small.

DATA ARCHITECT

Our data architect conceives of, and builds, distributed data pipelines capable of streaming and holding vast quantities of information.

DATA ENGINEER

The data engineers are talented computer scientists steeped in big data storage and distributed computation.

DATA DEVOPS

The DevOps engineer builds and manages cluster deployments.