## Nathan Buesgens

## Health Analytics Services



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### **Full Stack Solutions**

## Pragmatic solutions that build on your existing infrastructure.

Nathan is a "hands on" software architect and developer of <u>commonshealthanalytics.com</u> and the <u>OHDSI community</u> <u>dashboard</u>. His perspective as an architect is that:

- 1. A total enterprise transformation does not need to be a blocker for creating value. Solutions should build on your existing strengths and capabilities.
- 2. The best technical design is the one that best facilitates the collaboration of the teams using the solution.

Nathan will personally engage with your team to execute the development of health analytics solutions such as:

- Population-Level Research
   Nathan is an active contributor to the OHDSI community.
  - He is the developer of <u>commonshealthanalytics.com</u> and the <u>OHDSI</u> <u>community dashboard</u>
  - Nate implemented production data quality analytics to validate the de-identification methods at a large health site.
- Optimizing Healthcare System Operations
   Nathan has a background consulting with large
   enterprises in a variety of regulated industries.
  - He led a project at a large health site to migrate their OHDSI Common Data Model to Databricks to enable scale and new use cases.
  - He led an AI model governance project in a highly regulated enterprise to enforce compliance, while also enabling data scientists.
- Personalized Clinical Insights
  - Nathan has developed dashboards on a health site to provide a "360" view of patient history based on the OHDSI Common Data Model.
  - Nathan led a personalization project at a large retail pharmacy that implemented multiple constraint pricing optimization and promoted customer engagement.

#### A Focus on Execution

# Learning through doing, constant feedback, and critical retrospective.

#### 1. Identify the Critical Path to Production

Any deployment is better than the deployment that doesn't happen. Nathan will prioritize finding the path to production that takes advantage of your current strengths and capabilities. Rather than getting bogged down designing a solution you don't yet understand, begin learning and iterating immediately.

#### Measure Key Performance Objectives

Documenting requirements in a way that is explicit, falsifiable and measurable can easily become a "backlog grooming" distraction. Nathan will help maintain focus on your key requirements, and separate the meaningful objectives from the noise.

#### 3. Retrospect

Progress in complex technology projects requires constant, honest assessment. That includes progress toward key objectives, but also review of the starting assumptions, the choice of objectives, and the methods of execution.

### **Technical Expertise**

### Hands on experience with the full analytics stack.

#### Databricks Partner

Nathan has a history working with the Databricks product and holds multiple certifications. He can advise on the unique capabilities of Databricks.

- Use Delta Live Tables to implement streaming pipelines that improve data timeliness, reduce operational costs, and enforce data quality.
- Use the Unity Catalog to implement strong data governance and RBAC.
- Optimize your ETL pipelines for scalability and cost efficiency.
- o Use a single platform for your ETL, AI, ad-hoc analytics and production.
- Distributed Systems and Cloud Operations
  - Know the appropriate use of technologies such as the data lake, virtual networks, Kubernetes and "pubsub" messaging systems.
  - o DevOps processes that enable developers to deliver value end-to-end.
  - Understand the security and regulatory compliance implications of infrastructure design decisions.
- Analytic Application Development

Nathan has experience with the technologies that put the data in the hands of your end users.

- o ML including LLM prompt development and agent architectures.
- Web application development.
- Visualization with d3 and BI tools.