

Economic Engineering: Back End and Front End Engineering meet Economic Research and Policy Making

Kweku A. Opoku-Agyemang*

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Abstract

In this note, we create and explore an analogy between back end engineering, front end engineering, economic research, and policymaking. We show how these four processes share some common characteristics, goals, and challenges, and how they can benefit from each other's insights and best practices. We also discuss some aspects of making economics research and policy making more closely related, interdependent, and even more objective.

Keywords: back end engineering, front end engineering, economic research, policymaking.

*Chief Scientist, Machine Learning X Doing and Honorary Fellow, International Growth Centre, London School of Economics. Email: kweku@machinelearningxdoing.com. I thank several people at the Berkeley Expert Systems and Technologies Lab, the Berkeley Institute for Data Science, the Berkeley Institute for Transparency in Social Science, Cornell Tech and others for encouragement. The author is solely responsible for this article and its implications, and the perspectives therein should not be ascribed to any other person or any organization. Copyright © 2024 Machine Learning X Doing Incorporated. All Rights Reserved.

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1 Introduction

In this note, we explore the analogy between back end engineering, front end engineering, economic research, and policymaking. We'll show you how these four processes share some common characteristics, goals, and challenges, and how they can benefit from each other's insights and best practices.

If you're a web developer or software engineer or connected to the technology sector, you probably know the difference between back end and front end engineering. But have you ever thought about how these two aspects of web development are similar to economic research and policymaking?

2 What Is Back End Engineering?

Back end engineering is the process of building and maintaining the server-side of web applications and systems. It involves working with databases, APIs, servers, and other technologies that are not visible to the user. Back end engineers are responsible for the functionality, performance, and security of web applications.

3 What Is Front End Engineering?

Front end engineering is the process of designing and developing the user interface of web applications and systems. It involves working with HTML, CSS, JavaScript, and other tools that control what the user sees and interacts with on a website. Front end engineers are responsible for the appearance, accessibility, and usability of web applications.

4 What Is Economic Research?

Economic research is the process of applying scientific methods to study various aspects of the economy and society. It involves collecting, analyzing, and interpreting data, using mathematical models, and testing hypotheses. Economic researchers are responsible for producing knowledge, insights, and recommendations on topics such as growth, development, trade, inequality, and policy.

5 What Is Policymaking?

Policymaking is the process of establishing plans of action for a government, political party, or other organization. It involves identifying problems, setting goals, evaluating alternatives, and choosing solutions. Policymakers are responsible for creating, implementing, and evaluating policies that affect the public interest.

6 How Are Back End Engineering and Economic Research Similar?

Back end engineering and economic research are similar in that both require technical skills, analytical thinking, and problem-solving abilities. Both also deal with complex and abstract concepts that are not directly observable by the user or the public.

Some of the similarities between back end engineering and economic research are:

Both use data to inform their decisions and actions. Back end engineers use data to monitor and improve the performance, functionality, and security of web applications. Economic researchers use data to measure and explain the

behavior and outcomes of economic agents and systems.

Both use models to simplify and represent reality. Back end engineers use models to design and implement the architecture and logic of web applications. Economic researchers use models to formulate and test theories and hypotheses about the economy and society.

Both face uncertainty and trade-offs. Back end engineers face uncertainty and trade-offs when dealing with issues such as scalability, reliability, and compatibility of web applications. Economic researchers face uncertainty and trade-offs when dealing with issues such as causality, validity, and generalizability of their findings.

7 How Are Front End Engineering and Policy-making Similar?

Front end engineering and policymaking are similar in that both require creative skills, communication skills, and user-oriented thinking. Both also deal with visible and concrete aspects that are directly observable by the user or the public.

Some of the similarities between front end engineering and policymaking are:

Both use design to influence and persuade. Front end engineers use design to create attractive and engaging user interfaces that capture and retain the attention and interest of the user. Policymakers use design to craft appealing and compelling policies that win the support and approval of the public.

Both use feedback to improve and adapt. Front end engineers use feedback to test and optimize the usability, accessibility, and functionality of web applications. Policymakers use feedback to monitor and evaluate the effectiveness, efficiency, and equity of policies.

Both face constraints and challenges. Front end engineers face constraints and challenges when dealing with issues such as compatibility, responsiveness, and accessibility of web applications. Policymakers face constraints and challenges when dealing with issues such as feasibility, legitimacy, and accountability of policies.

8 How Are Back End Engineering and Front End Engineering Connected?

The connection between back end engineering and front end engineering is similar to the connection between economic research and policymaking in that both require collaboration, coordination, and integration. Both also aim to achieve a balance between functionality and aesthetics, between efficiency and effectiveness, and between feasibility and desirability.

Some of the ways that back end engineering and front end engineering are connected are:

Both depend on each other for the success of web applications. Back end engineering provides the foundation and infrastructure for web applications, while front end engineering provides the interface and interaction for web applications. Without a solid back end, a web application would not function properly. Without a user-friendly front end, a web application would not appeal to the user.

Both communicate and cooperate with each other for the development of web applications. Back end engineers and front end engineers use tools and protocols to share and exchange information, data, and code. They also use standards and best practices to ensure consistency and compatibility of web applications.

Both complement and enhance each other for the optimization of web applications. Back end engineers and front end engineers use techniques and methods to improve the performance, functionality, and security of web applications. They also use strategies and approaches to improve the appearance, accessibility, and usability of web applications.

9 How Can Back End Engineering and Front End Engineering Learn from Economic Research and Policymaking?

Back end engineering and front end engineering can learn from economic research and policymaking by applying some of their principles and practices to their own processes and projects. Here are some examples of how they can do that:

Back end engineers can learn from economic researchers by using more rigorous and robust methods to collect, analyze, and interpret data. They can also use more transparent and reproducible ways to document and share their code and results.

Front end engineers can learn from policymakers by using more systematic and strategic ways to identify, evaluate, and choose solutions. They can also use more ethical and responsible ways to design and implement their user interfaces and interactions.

Economic researchers can learn from back end engineers by using more efficient and effective tools and technologies to store, process, and visualize data. They can also use more innovative and creative ways to design and test their models and hypotheses.

Policymakers can learn from front end engineers by using more user-centric

and user-friendly ways to communicate and present their policies. They can also use more interactive and engaging ways to solicit and respond to feedback.

10 Conclusion

Back end engineering, front end engineering, economic research, and policymaking are four different but related processes that share some common characteristics, goals, and challenges. By understanding the analogy between them, we can gain new perspectives and insights on how to improve our own skills and practices.

At Machine Learning X Doing, we believe that economic engineering is the future of web development. We use next-level AI to solve the economy and the human condition. We integrate economic science into every aspect of web applications and systems, from the back end to the front end. We help our clients and partners achieve their full potential and make the world a better place.

If you're interested in learning more about our services and solutions, please visit our website machinelearningxdoing.com or contact us today contact@machinelearningxdoing.com. We'd love to hear from you and see how we can help you with your web or software development and economic impact needs.