



NORTHWESTERN UNIVERSITY

Data Science & Visualization

Boot Camp

Cohort: June-November, 2020

PROJECT PROPOSAL

PROJECT NAME	OIL DATA ANALYTICS		
PROJECT REPO	https://github.com/OlegRyzhkov2020/oil-project		
EST. START DATE	October 3, 2020	EST. FINISH DATE	October 17, 2020
PROJECT LEADER	Oleg Ryzhkov	PROJECT TEAM	Amr Alwakel, Jildiz Amirakul
PHONE	312 479-36-51		Elain Cheung, David Eisenstein
EMAIL	oleg.n.ryzhkov@gmail.com		Zuzana Svorenova
TECHNOLOGIES	Back end: Python (SQLAlchemy, FLASK), PostgreSQL, R Front end: JS(D3, Leaflet, HighChart), HTML/CSS		

SUMMARY	Oil is and will be a prominent resource in the world economy for decades to come. Therefore, understanding its behavior in the market is important for a wide range of entities. One of the tools that helps us analyze oil trends is data analytics. Historical oil data helps us reveal and recognize patterns, which can be put into models that generate meaningful insights. Oil behavioural models could be useful not only for oil traders but also for other industries' data driven decision making.
PROJECT OBJECTIVES	<ul style="list-style-type: none">❖ Historical world oil data analysis: Crude oil production, energy consumption, number of active crude oil rigs, crude oil reserves (monthly, 1990-2020)❖ Oil prices analysis: Brent, WTI, Arab Light, Urals ((monthly, 1990-2020)❖ US oil market infrastructure analysis: refineries, ports, import/export, number of active crude oil rigs❖ Revealing relationships between price and key oil market indicators
ACTION TO COMPLETION	<ul style="list-style-type: none">❖ Data Collection & Database Management (David & Amr)❖ Data Visualization (Zuzana & Jildiz)❖ Regression and Time-Series Analysis in R (Elaine & Oleg)❖ Heroku Deployment (Oleg)
DATA SOURCES	<ul style="list-style-type: none">❖ U.S. Energy Information Administration https://www.eia.gov/❖ WorldBank https://data.worldbank.org/❖ Quandl platform https://www.quandl.com/
PROPOSAL MAY BE WITHDRAWN IF NOT ACCEPTED BY DATE OF	
October 6, 2020	

ACCEPTANCE OF PROPOSAL

INSTRUCTOR/TA SIGNATURE		DATE OF ACCEPTANCE	
-------------------------	--	--------------------	--