

# Pandemics vs stock market

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## Intro

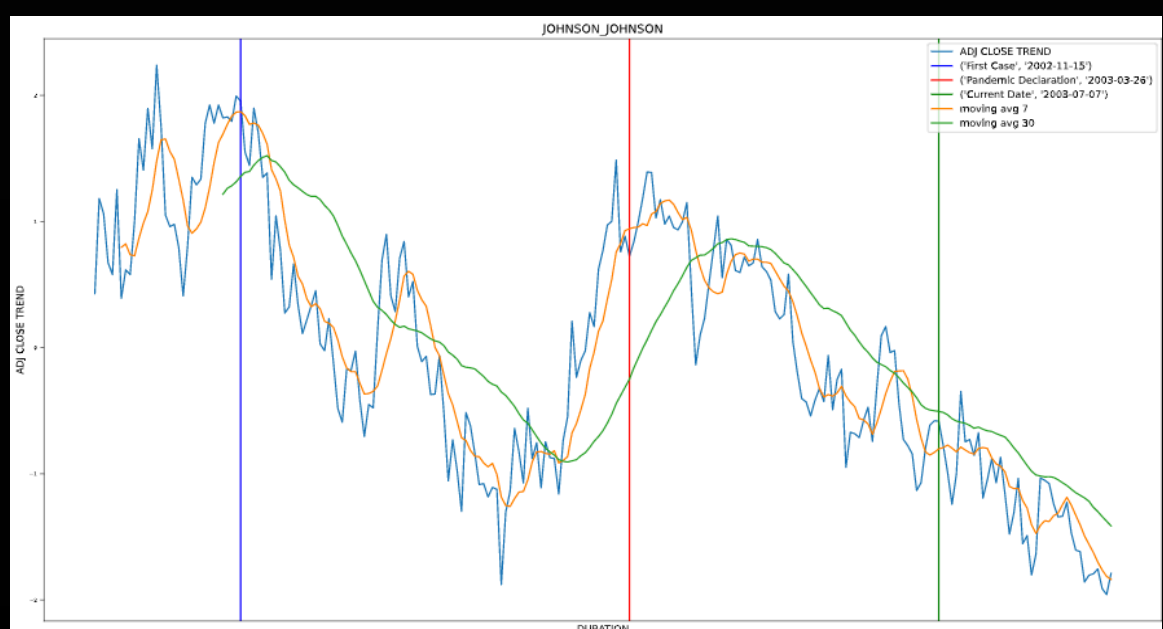
- Analyzed past pandemics to compare to current covid-19 pandemic
- Predicted buy/sell stocks during pandemics

## Methods

- Machine learning models used: Linear Regression, KNN, SVC and Random Forest
- ARIMA model
- Moving Averages
- Data Visualization

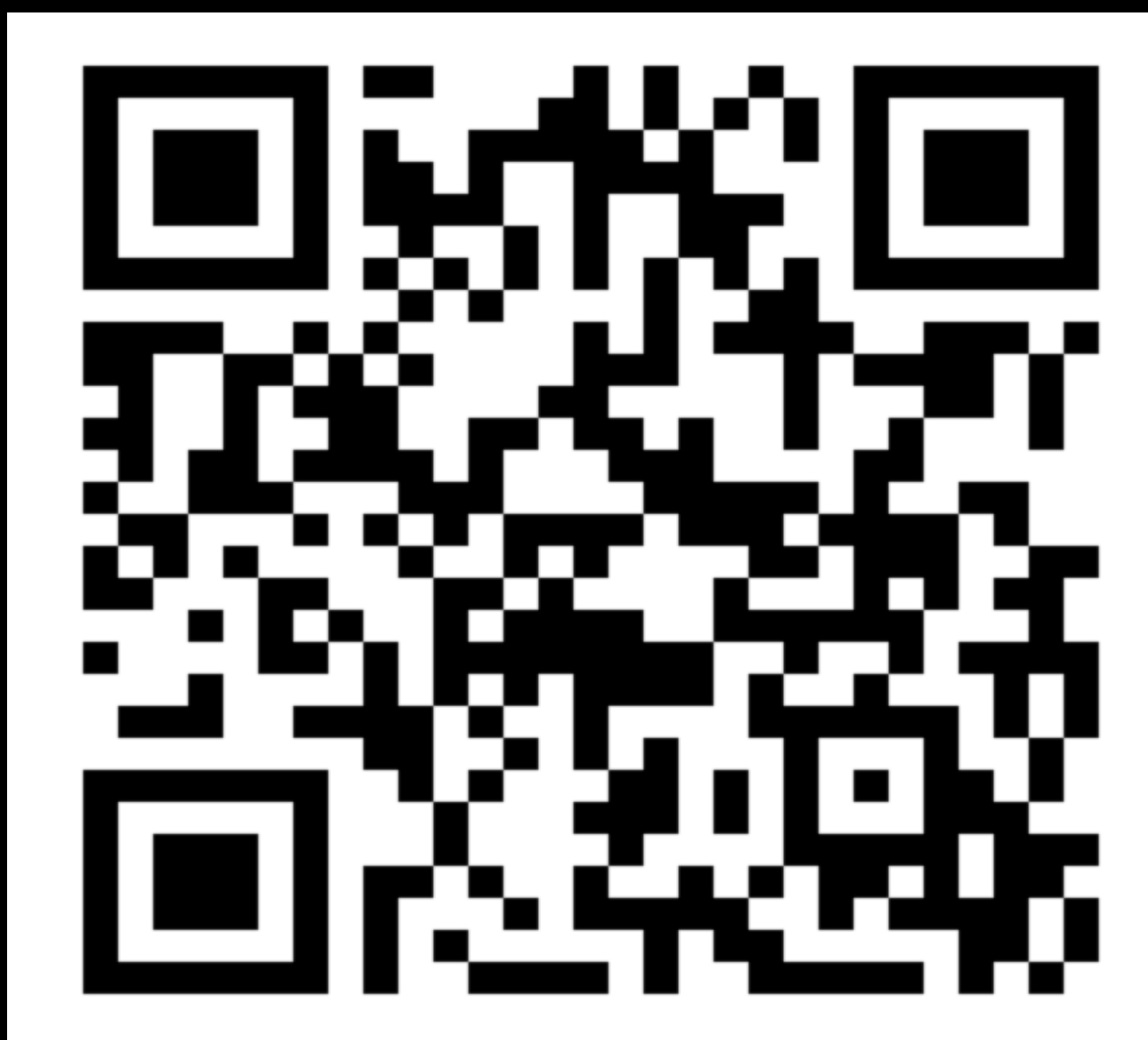
## Result

- Uncertain prediction due to many factors
- Ensemble learning increases probability of prediction being correct
- Ex. JnJ during SARS model predicted



Team Sigmoid Frontsquart

With the help of **data** from **stock** numbers during past pandemics **machine learning** can **help** you make a data driven decision to **buy, hold** or **sell** during **Covid-19**



## Model Results

### Apple

AAPL								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	160	146	10	0.53		52	19	0
H1N1	183	122	30	0.45		65	19	0
Ebola	122	211	102	0.41		64	69	1
COVID-19	62	39	8	0.4942		25	2	1

### Nike

NIKE								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	160	121	53	0.5063		52	26	1
H1N1	161	121	53	0.4167		68	14	2
Ebola	208	172	53	0.3657		74	52	8
COVID-19	51	39	19	0.3214		21	6	0

### Johnson & Jonson

JNJ								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	110	143	63	0.4404		11	64	4
H1N1	97	64	174	0.4881		4	6	74
Ebola	153	144	237	0.4254		4	31	99
COVID-19	52	29	28	0.3571		23	0	5

### Ford

F								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	164	131	21	0.461		57	22	0
H1N1	185	139	11	0.5119		61	23	0
Ebola	191	212	131	0.3582		10	110	14
COVID-19	34	56	19	0.3929		2	3	23

### Alaska Airlines

ALK								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	153	151	12	0.4694		43	36	0
H1N1	211	116	8	0.5238		65	19	0
Ebola	294	204	36	0.5298		104	30	0
COVID-19	35	62	12	0.4943		2	25	1

### Chevron

CVX								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	128	76	112	0.4431		32	16	31
H1N1	149	127	59	0.3571		56	25	3
Ebola	163	217	154	0.3806		5	114	15
COVID-19	30	54	25	0.5714		4	22	2

### American Express

AXP								
	buy-train	sell-train	hold-train	accuracy		buy-test	sell-test	hold-test
SARS	147	131	38	0.4684		45	33	1
H1N1	191	122	22	0.5852		71	13	0
Ebola	156	205	173	0.3731		7	111	16
COVID-19	46	40	23	0.4943		19	7	2