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# ALGORITHMS IN YOUR NEIGHBORHOOD

THIS MAP SHOWS THE PHYSICAL LOCATIONS OF SOME OF THE PUBLIC ALGORITHMS  
AT WORK IN PITTSBURGH, PENNSYLVANIA.

HAVE YOU HEARD OF THESE PROJECTS?  
HERE'S WHERE THEY ARE AND WHAT THEY'RE DOING.

## SMART TRAFFIC LIGHTS (SURTRAC)

**OUTPUT:** WHEN SHOULD TRAFFIC LIGHTS CHANGE?

**PROJECT NAME:** **SURTRAC 2.0**

**LOCATION:** Corridors along 5th Ave, Centre Ave, Penn Ave.

**DEPLOYMENT:** Penn Ave, Centre Ave, Highland Ave  
40.4607, -79.9233

**OWNERSHIP:** PGH Dept. of Mobility & Infrastructure / RapidFlow

**GOAL:** Change flow of traffic via timing intersection signals  
by detecting & predicting traffic

**DATA COLLECTED:** VIDEO CAMERAS / PEDESTRIAN CROSSING BUTTONS

## PREDICTIVE POLICING

**OUTPUT:** WHERE SHOULD EXTRA POLICE BE DEPLOYED?

**PROJECT NAME:** **PITTSBURGH CRIME HOT SPOT PROGRAM**

**LOCATION:** Pittsburgh Police Zone 05 HQ  
1401 Washington Blvd  
40.4742, -79.9081

**DEPLOYMENT:** 2 x each Police Zone District

**OWNERSHIP:** Pittsburgh Bureau of Police / CMU Metro21

**GOAL:** Predict crime hot spot locations & prevent serious  
violent crimes by dispatching additional police patrols

**DATA COLLECTED:** CRIME REPORTS / 911 CALLS

## PRETRIAL RISK ASSESSMENT

**OUTPUT:** PRE-TRIAL, WHAT IS YOUR FLIGHT & RE-ARREST RISK?

**PROJECT NAME:** **PUBLIC SAFETY ASSESSMENT RISK ASSESSMENT TOOL**

**LOCATION:** Allegheny County Courthouse  
436 Grant St  
40.4602, -79.9528

**DEPLOYMENT:** Allegheny County 5th Judicial Court /  
Pittsburgh Municipal Court

**OWNERSHIP:** Allegheny County Pretrial Services, Arnold Ventures

**GOAL:** Provide judges scores to inform pretrial bail decisions  
around release or cash bail amounts before a court date

**DATA COLLECTED:** PERSONAL DATA / RESIDENCY / EDUCATION /  
PRIOR ARRESTS / PENDING CHARGES / PAROLE /  
FAILURE TO APPEAR / CHARGE TYPE

## PREDICT FIRES

**OUTPUT:** WHICH BUILDINGS SHOULD FIRE DEPT INSPECT?

**PROJECT NAME:** **FIRE RISK ANALYSIS MODEL**

**LOCATION:** Bureau of Fire HQ  
200 Ross St, 5th FL.  
40.4367, -79.9978

**DEPLOYMENT:** Online Dashboard "Burgh's Eye View"  
http://pittsburghpa.shinyapps.io

**OWNERSHIP:** Pittsburgh Bureau of Fire / CMU Metro21

**GOAL:** Prevent building fires

**DATA COLLECTED:** PAST FIRE DATA / PROPERTY VALUES /  
PROPERTY INSPECTION DATA

## FAMILY SCREENING

**OUTPUT:** HOW RISKY IS THIS CALL-IN SITUATION?

**PROJECT NAME:** **ALLEGHENY FAMILY SCREENING TOOL  
PREDICTIVE RISK MODELING IN CHILD WELFARE**

**LOCATION:** AC Dept of Human Services  
1 Smithfield St, Ste 400  
40.4370, -80.0008

**DEPLOYMENT:** AC Dept of Human Services Office of Children,  
Youth and Family Services / Pittsburgh Municipal Court

**OWNERSHIP:** Allegheny County Dept of Human Services /  
Center for Social Data Analytics

**GOAL:** Help child welfare agents decide whether to  
investigate a call or not

**DATA COLLECTED:** CHILD WELFARE CALL-INS / PAST FAMILY CASE FILES

## What is an algorithm?

An algorithm is a set of instructions that a  
computer follows to accomplish a task or  
calculation.

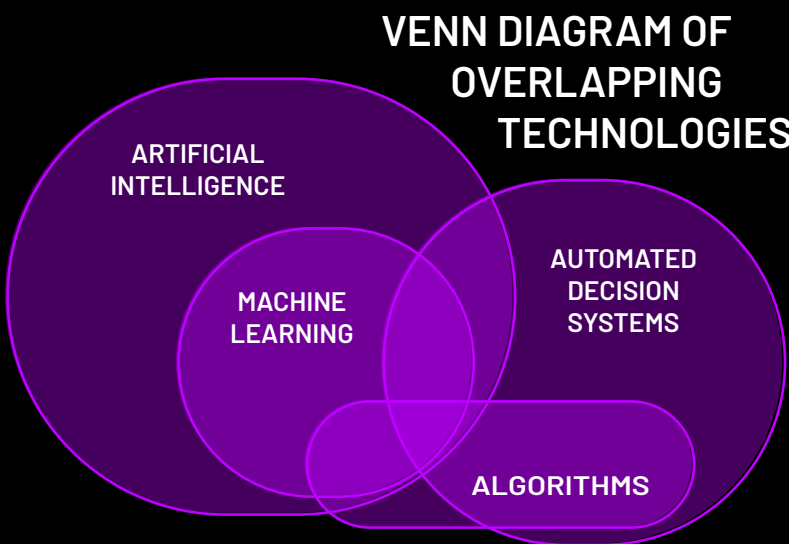
## What's the difference with other technologies?

Artificial Intelligence (AI) is a broader term used  
to describe giving machines the ability to  
perform complex tasks typically associated  
with humans, such as learning, recognizing, etc.

Machine learning is a subset of AI using  
algorithms and statistical models to learn  
patterns from past data and apply them to the  
unknown.

Automated Decision Systems use any of these  
tools to calculate an outcome that determines  
a decision.

Explore more local algorithms at  
[mappingthemachine.com](http://mappingthemachine.com)



Algorithms are increasingly being deployed in public  
settings, often without the knowledge, understanding, or  
input of the public. These deployments can often have  
positive effects on citizens (e.g., less traffic through CMU's  
game-theoretic control of traffic lights), but can also be a  
source of concern or controversy (e.g., use of crime data for  
predictive policing, or risk assessment).

This project aims to bring broader awareness and spark  
discussion on these systems, and invite public opinion on  
what technologies serve their interests, and how technology  
should be governed in their own communities.

interactive / feedback page

add on 8 1/2 x 11



