## Filing a Smarter TSA Claim

**Spencer Tollefson** 

#### Background



# Transportation Security Administration »

#### Daily:

- » 2,000,000 passengers
- » 6,900,000 bags
- » 1 in 45,000 files claim

## Worth filing?

Witnesses

Personal Insurance

Receipts

**Appraisals** 

		1. Su
	You have dov AND you b	Cla TS 70 Ari
	This is	57 tsa
Dear Traveler:	INSTRUCTIONS	3. Tyr
The Transportati	CLAIM SUFFICIE	8. B/
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OR	9. Subr	10. STAT
Fax y	WHERE TO SUB	IF OT
Once TSA has be there often is up governs the way	U.S. Mail Addres TSA Claims Mana 701 South 12th St Arlington, VA 205	
within six month about pursuing a	FAX: (571) 227-1904	11. 1. N
of the Code of Fe	EMAIL:	2. N
We're sorry you	TSAClaimsOffice@	12.
Regards,	Once Submitted, y This letter will inclu	12a. F
TSA Claims Ma	with the TSA Claim  IMPORTANT:	L
	TSA has seventeer	
Enclosures: 4	1. San Fr 2. Kansa	13a. S
	3. Sioux 4. Roche	
	5. Tupelo	
	6 Jackso	TI

	CLAIM FOR DAMAGE, INJURY, OR DEATH	INSTRUCTIONS: Please read the You will receive an Acknowledge	instructions below carefully and supply all the information requested.  ment Letter and Control Number.	APPROVED OMB NO. 11050008		
	Submit To Appropriate Federal Agency:	Name, Address of Claimant and claimant's person	nal representative, if any. (See instructions above.) ( Number, street, city, state, and zlp code)			
	200 AV S	Claimant Information:	Claimant's Representative: (if any)			
You have do	Claims Management Branch TSA (TSA - 9)	Full Name:	Full Name:			
AND you b	701 South 12th Street Arlington, Virginia 20598-6009	Address:	Address:			
This is		City, State, Zip:	City, State, Zip:			
THISIR	571.227.1300 tsaclaimsoffice@tsa.dhs.gov	11 11 11 11		AGENT, OR LEGAL		
		Country:	Country:	MONEY DAMAGES IN A ICIDENT. THE CLAIM		
INSTRUCTIONS	Type of Employment: 4. Date of Birth     Military Civilian	5. Marital Status: Single Married	6. Day and Date of Incident 7. Time: (A.M. or P.M.)			
			ry, or death, identifying persons and properly involved, the place of occurrence and the cause the	on the reverse side. Part 14. Many		
CLAIM SUFFICIE	C. Droid of Germi (Sale in Geal to Non	nace and orealistated distancing the damage, injur	ry, or death, something persons and property interved, and place or occurrence and are death and	, rater many		
1. The c				ted with said claim		
2. The c				of the claimant. If the dence of his/his		
3. The c				intends to file claim for		
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5. A da				n, or incapacitation,		
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NINE USEFUL HI	9. NAME AND ADDRESS OF OWNER IS OTHER	PRO R THAN CLAIMANT: (Number, street, city, state, cou	OPERTY DAMAGE	t.		
To speed the proc	Full Name:	Address: Number, sines, dry, state, oc	City, St. & Zip: Cou	nt should submit		
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4. Rep 5. Pho						
6. Poli				r rights.		
7. Air ( 8. Fill (						
9. Subr	10. PERSONAL INJURY / WRONGFUL DEATH STATE THE NATURE AND EXTENT OF EACH INJURY OR CAUSE OF DEATH, WHICH FORMS THE BASIS OF THE CLAIM.					
WHERE TO SUB	IF OTHER THAN CLAIMANT, STATE THE NA	ME OF THE INJURED PERSON OR DECEDENT	THE BASIS OF THE CLAIM.			
U.S. Mail Addres						
TSA Claims Mana 701 South 12th St						
Arlington, VA 2059						
FAX:	11.		WITNESSES	No		
(571) 227-1904	1. Name:	Address/Phone:				
EMAIL: TSAClaimsOffice@	2. Name: 3. Name:	Address/Phone: Address/Phone:				
1 SACIalmsOffice@	12.		OF CLAIM (In U.S. Dollars)			
Once Submitted, y	12a. PR OPERTY DAMAGE	12b. PERSONAL INJURY	12c. WRONGFUL DEATH 12d. TOTAL Failure to specify for feiture of your rights)	maycause		
This letter will inclu			To kilde of your spilly			
with the TSA Claim						
IMPORTANT:	I CERTIFY THAT THE AMOU	NT OF THE CLAIM COVERS ONLY DA	AMAGES AND INJURIES CAUSED BY THE INCIDENT ABOVE AND A	GREE TO		
TSA has seventeer	AC	CEPT SAID AMOUNT IN FULL SATISF	FACTION AND FINAL SETTLEMENT OF THIS CLAIM.			
1. San Fr	13a. SIGNATURE OF CLAIMANT OR CLAIM.	ANT'S REPRESENTATIVE: (See instructions below)	) 13b. PHONE NUMBER OF SIGNATORY: 14. DATE OF CLAIM:			
2. Kansa 3. Sioux						
4. Roche	CIVIL PENALTY FOR PRE	SENTING FRAUDULENT CLAIM	CRIMINAL PENALTY FOR PRESENTING FRAUDULEN	T ode) NO		
5. Tupelo 6. Jackso	The claimant is liable to the Un	ited States Government for the civil	CLAIM OR MAKING FALSE STATEMENTS			
	penalty of not less than \$5,000 a	nd not more than \$10,000, plus three		five (5) years		
Claims pertaining to claim for an inciden		es sustained by the Government. U.S.C. 3729.)	or both. (See 18 U.S.C. 287, 1001.)			
	95-109	NSN 7540-00-634-4046	5 Standard Form 95 (Rev. 7-85) (	EGV		
	Previous editions not usable.	100000000000000000000000000000000000000	PRESCRIBED BY DEPT. OF JUSTICE 28 CFR	14.2 Page 2 of 4		

OTHER

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AMAGED.

#### Workflow

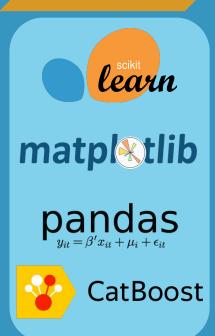
**Data Collection** 



Cleaning & Analysis

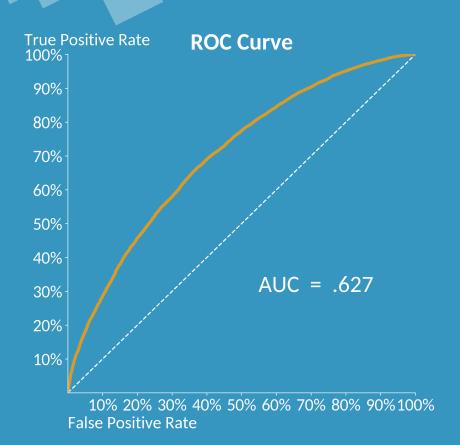


Modeling



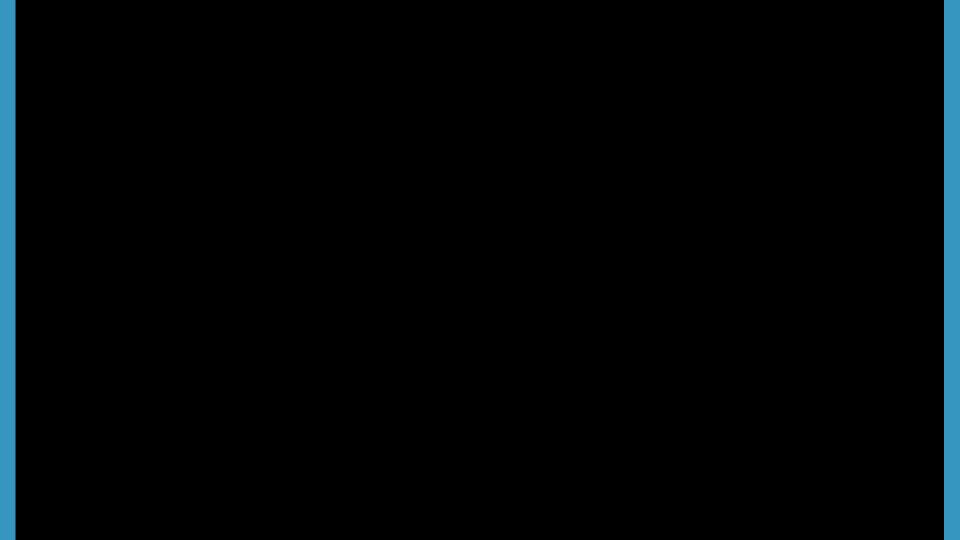
Deployment





#### Model

- » Predict probability a claim will be successful
- » Gradient Boosting on Decision Trees (Yandex's Catboost)



#### Conclusion

- » Model produces predictive value
- » App provides useful estimate of claim outcome

#### **Future Work**

- » Include new features to improve model
- » Regression analysis to predict dollar value of TSA refund

### **Thank You**



spencertollefson.com



spencer@spencertollefson.com



spencertollefson



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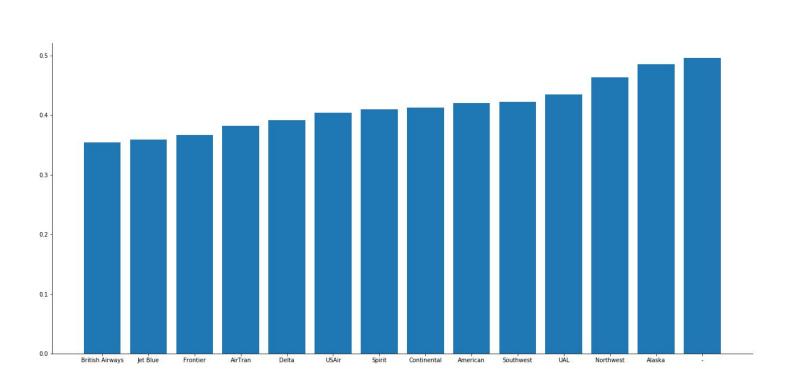


## **Appendix**

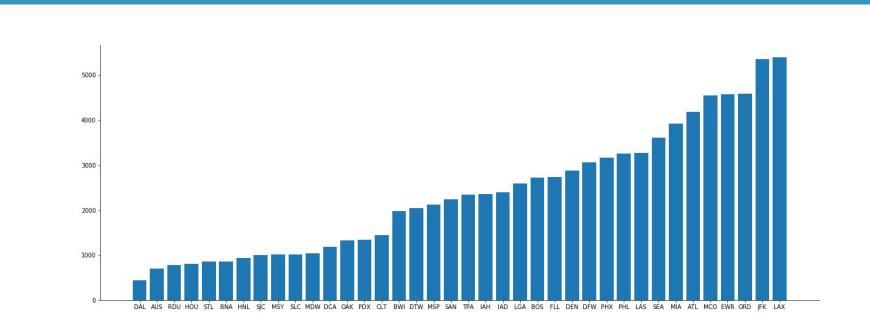
#### What Increases Odds of Compensation?

- » Property Damage > Lost Property
- » Checkpoint > Checked Baggage
- » First Half of Year > Second Half of Year
- » Clothing and Cosmetics > Computers, Jewelry, and Cameras

## **Probability by Airline**



## **Claims by Airport**



## **Probability by Airport**

