

The Power of Artificial Intelligence to Improve Student Engagement and Success

Panelists:

Elizabeth Adams, Associate Vice President for Undergraduate Studies, CSU Northridge

Amir Dabirian, Vice President for IT/CIO, CSU Fullerton

Andrew Magliozzi, Co-Founder and CEO, AdmitHub

Moderator:

Michael Berman, Chief Technology Innovation Officer, CSU Office of the Chancellor

Artificial Intelligence: using machines to do tasks traditionally associated with humans

Machine Learning: software that can be trained so its performance on a task improves over time

Modern AI systems are Prediction Systems

The Promise: AI systems use statistical analysis on large data sets to make predictions – in this situation, if nothing changes, a particular outcome is likely

The Risk: Treating an AI prediction as a statement of future certainty

The Remedy: Insisting that human judgment drive the decision making process

“Smart” Tutors

Machine Grading of Essays

Machine Learning for predictive analytics

Scheduling Assistants

Conversational AI: “Chatbots”



Introducing the Panel



CALIFORNIA
STATE UNIVERSITY
NORTHRIDGE

- One of the largest and most diverse campuses in the system (MSI, HSI, AANAPISI, high Pell population)
- Only four year university in the San Fernando Valley
- GI 2025 goals: 66% six year rate for FTF, 30% four year rate for FTF
- Current rates: 54% six year rate: % four year rate
- Equity gap: 12-14%
- Our graduation rate problem is a retention problem. We were losing 22-25% after our first year. Those rates got better in the subsequent years, but that drop off is too significant to ever make the GI 2025 goals.

Cal State Fullerton

Founded in 1957

at a glance...

40,389 students as of Fall 2017

109 Degree programs

43% underrepresented students

45% Pell Grant recipients
(undergraduates)

58% first-generation college students
*(undergraduates; neither parent graduated
from 4-year college)*



Conversational AI for College Success

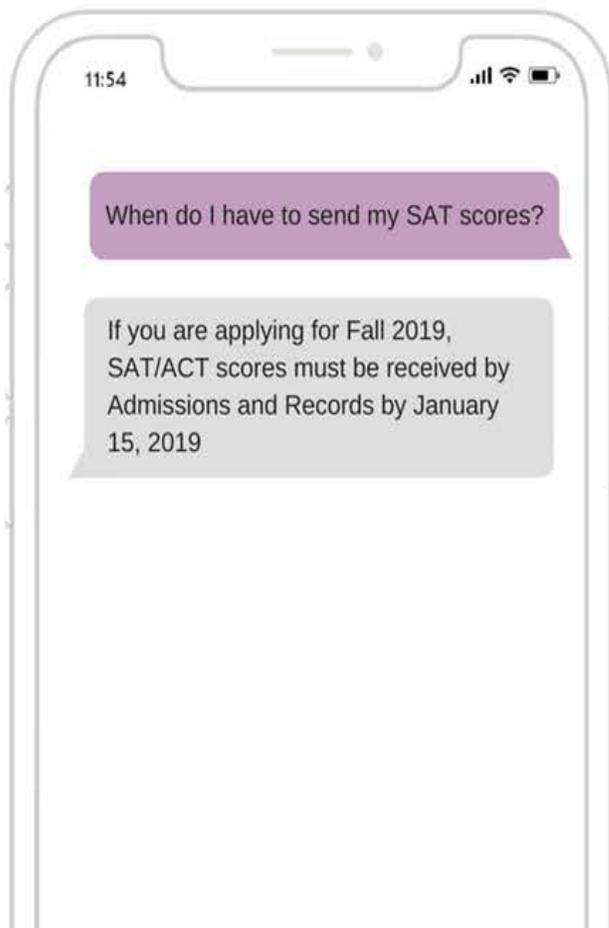
**Meeting students where they are
to get them where they're going.**



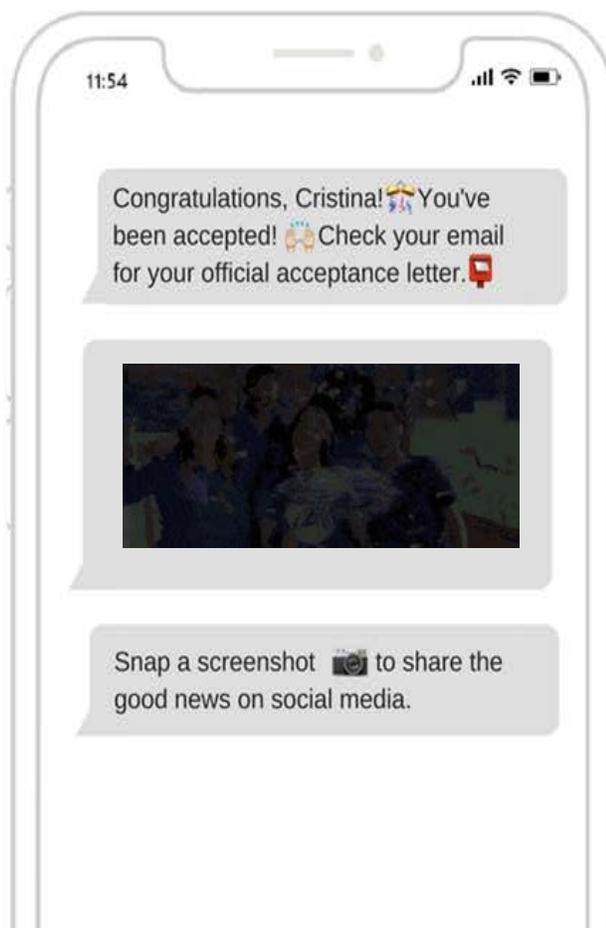
Problem and Solution



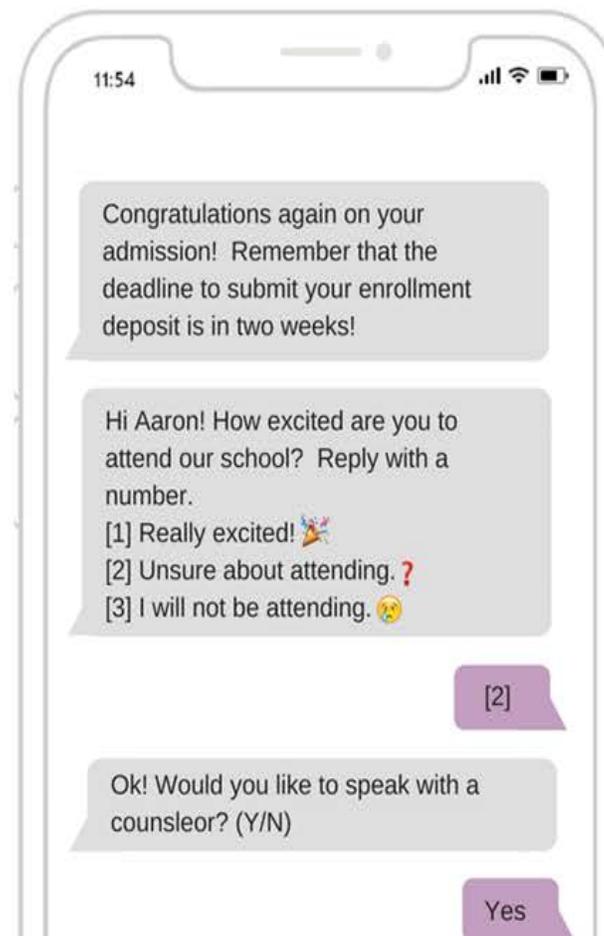
AI Answers



Fun



Guidance



The problem

- GI 2025 goals: 66% six year rate for FTF, 30% four year rate for FTF
- Current rates: 54% six year rate: 14.5% four year rate
- Equity gap: 12-14%
- Our graduation rate problem is a retention problem. We were losing 22-25% after our first year. Those rates are getting better (81%!) but that drop off is too significant to ever make the GI 2025 goals.
- Lots of efforts around FTF and DFU courses; intrusive advising; Matadors Rising

CSUNny!

- Podcasts are awesome and so are CSU connections
- The bot has a friendly, informal tone, and runs on artificial intelligence.
- 94% of the 2,672 students contacted have opted in to using the system.
- CSUNny's initial focus was on getting our incoming students ready for their freshmen year, with nudges about Early Start, advisement, registration, transcripts, housing, etc. Currently we are doing more informing about services, events, reminders, and general check-ins.



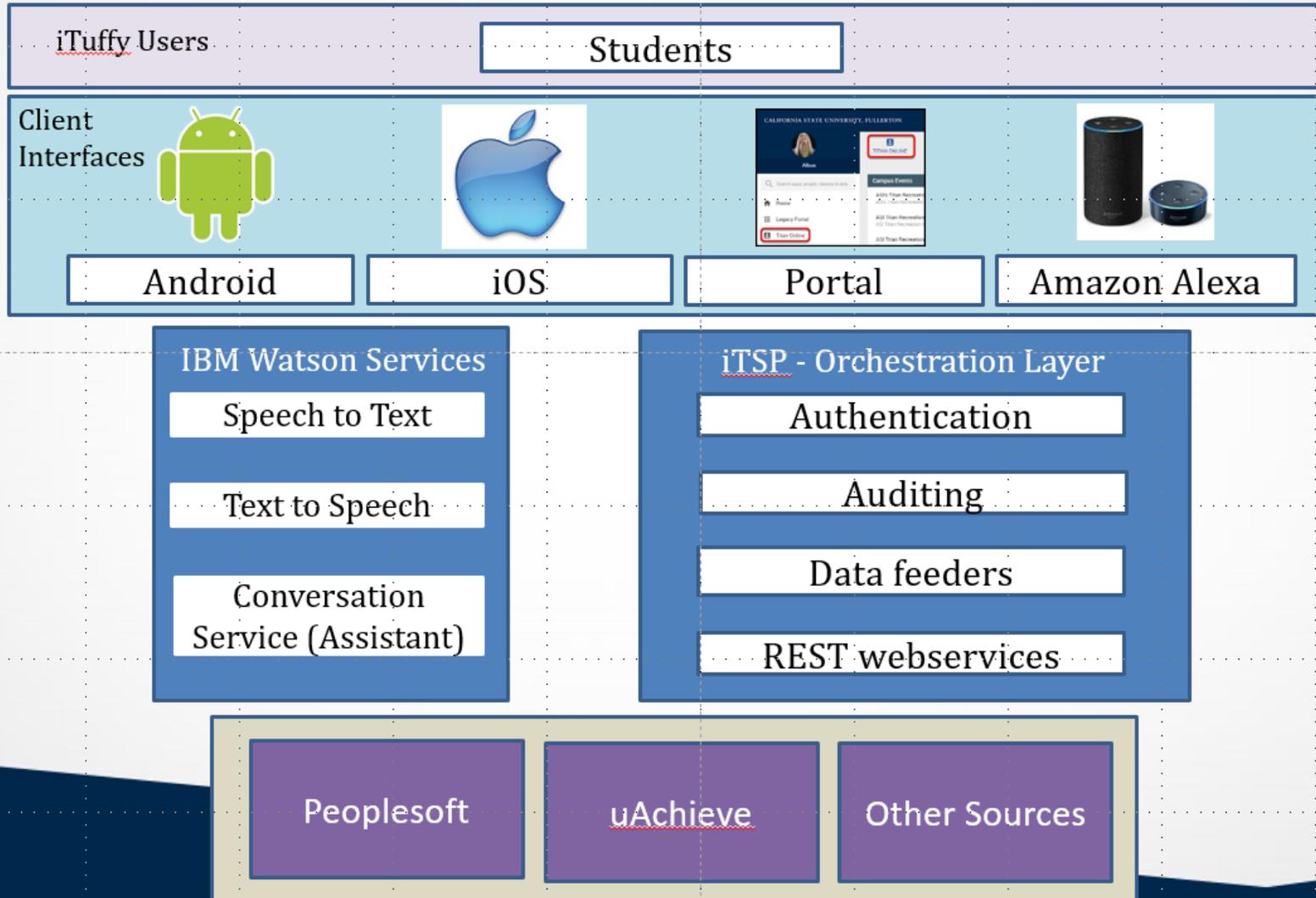
The Goal for iTuffy

- Positive student experience (social, academic, financial, etc...)
 - Highlights major events on campus
 - Answer academic advising related questions
 - Provide information on financial aid for students
 - Act as a triage directing students to advising or other campus services
- Meet graduation goals for GI 2025
 - Ability to answer questions 24/7 when offices are not available for students
 - Accurate information is readily available
 - Machine Learning improves speech recognition and conversational responses
- Campus companion for every student
 - iTuffy's cognitive engine learns through interactions and questions asked by students making it even better at providing future responses.

What is iTuffy?

- iTuffy is a Artificial Intelligent Chatbot that uses speech or text to provide answers to questions anytime of day 24/7
 - campus services, locations, operating hours, events, campus life, etc.
 - common questions that students may have about financial aid grades, registration, and their major.
 - Specific questions such as my student id, and GPA
- iTuffy is designed to scale as needs change on campus.
 - Flexible conversation engine allows for easy addition of content
 - Supports any web, mobile, or consumer platforms
- iTuffy is available to students on our iFullerton mobile app for IOS and Andriod, Campus Portal, and Amazon Alexa devices such as Echo and Echo Dot
- Campus Usage – Fall 2018
 - Over 1500 conversations during the 1st day of class
 - Over 4000 conversations during the 1st week of class

iTuffy Architecture



What Did You Learn?

Recommendations and Future Work

- Recommendations
 - Continue to work closely with campus stakeholders
 - Ensure accurate responses and monitor machine learning
 - What questions should not be answered? Triage and redirect students to on campus services
 - Monitor infrastructure for expansion
- Future Work
 - Personalized content will be added to iTuffy for students to view their schedule, access directory information, etc.
 - Deploy Amazon Alexa devices to Housing Dorms and other common areas around campus
 - Financial Aid and Student Financial Services support
 - Graduate Advising
 - Auto scheduling with advisors



Some early lessons

- You really don't know what they want to know
- They do like texting. Recent conversation with CSUN AS leadership proves this
- You need a writer and a team
- You also need good PR
- Can be adapted to your needs (summer melt v retention)
- Expansion plans and grant funding

Discussion: What's Next?

Resources here:

tiny.cc/GI2025AI