Artificial Intelligence & the Card Office
Tony, Who?

- Principal Engineer at OnlinePhotoSubmission.com
- Working with card offices for 7+ years
- Working with AI/ML 8+ years
- Passion for Foster Care & Adoption
- W&M Class of 2000

Tony@OnlinePhotoSubmission.com
Our vision is a world without child suffering.
What is A.I.

➔ Software capabilities that in a human would require intelligence.

➔ Software that can improve itself.

➔ Software that is human-like.
Guiding Principle

Technology should be rehumanizing NOT dehumanizing.
What is Machine Learning
Examples
Examples: Artificial “Judgement”
Examples: Artificial “Judgement”
General vs. Narrow A.I.

Moravec’s Paradox >>>

‘The main lesson of thirty-five years of AI research is that hard problems for humans are easy for the machine and easy problems are hard.’
A.I. in Higher Ed: Roommate Matching
Helper Bot

- Helper Bot is an artificial intelligence robot
- Auto Cropping
- Auto Rotating
- Auto Grading
- Auto Feedback
- Auto Approval and Denial
NACCU Carding Event

- 450 Photos
- 120 Cardholders
- 80 minutes
- 10.7 seconds per photo
- 40 seconds per cardholder
Auto Cropping

➔ Helper Bot will perfectly crop photos that are submitted by students.

➔ This photo has far too much margin to be used as an ID photo.

➔ Helper Bot recognizes this and makes the necessary changes.
Auto Cropping

- Helper Bot has identified the face in the image, and cropped the photo to a square aspect ratio (customizable).

- Helper Bot eliminates the possibility of student cropping error (SCE).

- This picture can now be used as an ID photo.
The new Apple and LG phones will often strip the metadata from submitted photos.

As a result, photos are submitted sideways.

This does not stop Helper Bot from salvaging the image.
Auto Rotating

→ Helper Bot identifies the face and rotates the photo to the right position.

→ The photo is flipped to its correct orientation within seconds.

→ Helper Bot will keep the original image within the admin interface for reference.
Auto Grading

Photos are analyzed, graded, and categorized.

A colored bar is placed under the photo to indicate its usability.
→ Photos are sorted according to their color.
→ Green goes to the top, yellow in the middle, and red at the bottom.
→ Photos are approved/denied on this page
Auto Feedback

When a photo is submitted, auto feedback is sent to the student’s email.

If the ID photo is good, Helper Bot will let the student know that their photo will probably be approved.

Hello to me:

Hi, I've reviewed your photo, and I think it looks good! Thank you for your submission. A human will review your photo shortly to confirm.

Is something wrong with your photo?

Edit your Photo

Thank you!

CloudCard Helper Bot

P.S. CloudCard Helper Bot is an artificial intelligence Bot that helps your card office serve you better.
Sometimes improper ID photos are submitted by students.

Helper bot will provide instant photo feedback letting the student know that their photo will likely be denied.

He provides a new link for submitting a proper photo.
Different schools have different standards.

Helper Bot’s sensitivity can be tuned to meet different standards.

Completely new bots can be trained for specific schools.
Helper Bot has been trained with thousands of different photos to help him identify a quality ID photo.

Once you accumulate more photos, he can be customized to your card office.

When you get more comfortable with him, you can set him to automatically approve and deny photos.
Why is this important?

➔ 110 Full Time Employees

➔ 1250 School Years
A.I. Tomorrow
Background Removal: Coming Soon
Virtual Agents: Coming Soon

Hi, Chloe, this is the Eastern College OneCard Office. We need your photo for your OneCard. Instead of standing in line at the office, you can just text it back to this number.

Hi, Chloe, this is the Eastern College OneCard Office. We need your photo for your OneCard. Instead of standing in line at the office, you can just text it back to this number.

Thanks! We’ll take a look to make sure it will work.

Thanks! We’ll take a look to make sure it will work.

That looks great! Your OneCard will be waiting for you when you arrive at orientation.
Government ID Verification: Coming Soon
Image Enhancement
Fraud Detection
First Responder Person Identifier

Jane Doe
(1234567)
Graduate Student
School of Business
Student Locator

➔ Emergency: Who’s in this building?
➔ Attendance Tracking
➔ Person Locator
➔ Person Location History
Ethical Concerns
Ethical Concerns: Jobs
Ethical Concerns: Jobs
Ethical Concerns: Jobs
Ethical Concerns: Failure
Ethical Concerns: Failure

(a) Husky classified as wolf
(b) Explanation
Ethical Concerns: Privacy
Ethical Concerns: Privacy
Now, what?
You can’t hold back the tide...
Never stop learning!

“Lifelong Learning is an Economic Imperative.”
The Economist Special Report
Leverage Moravec’s Paradox

‘The main lesson of thirty-five years of AI research is that hard problems for humans are easy for the machine and easy problems are hard.’
What is uniquely human?
Deep Thinking
THANK YOU!