How an artificially intelligent virtual assistant helps students navigate the road to college

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Strategies to reduce summer melt

- HS counselor / advisor outreach
- Outreach via HS-university partnership
- Peer mentor outreach
- Navigating complexity
- Simplifying information
- Facilitating access to support
- Text-based info & outreach

Outreach via HS-university partnership
Limitations to existing strategies

These limitations point to the potential benefit of a more sophisticated technological solution.

• Not data informed

No information about specific tasks students need to complete and whether they have completed them. All students get same outreach. If students perceive outreach as not relevant, they may pay less attention.

• Limitation to scale

Summer outreach and student communication requires ongoing staff monitoring, engagement and time.

• Staff repeatedly solving same problem

If staff members are providing one-at-a-time answers to student questions, they run the risk of answering the same question repeatedly.
Georgia State University Partnership

University-specific effort to reduce summer melt

• GSU context
  • High rates of summer melt among recent cohorts
  • Majority of incoming students are Pell eligible
  • 1/3 admitted students are first-generation college goers

• Research collaboration with AdmitHub
Meet Pounce

- Reminders
- Guided Tutorials
- Surveys
Building Pounce

Separate workflows pertaining to all steps in the GSU college transition process:

- Intent to enroll form submission
- FAFSA submission/verification, accepting loans, paying tuition bill
- Orientation registration & attendance
- Transcript and test scores submission
- Housing deposits
- Immunization records submission
- Placement test sign-up
- Planning for transportation
- Meal plan sign-up
Hey {First Name}, do you plan to park a car on campus? 🚗🚗

Yes

Cool! Would you like me to help you get a parking permit?

No

OK. For future reference, visit bit.ly/parking for parking info. 🚗 For other modes of transportation (shuttles 🚌, the metro 🚄, bike shares 🚴, Zipcar, etc.) go to bit.ly/transit.

No

Yes

Visit bit.ly/parking to see parking fees and rates, and to figure out what option will best fit your needs. To register your vehicle and get a permit, please create an account here: bit.ly/parkpermit.
Hi Mike! Congrats on being admitted to Georgia State! 🎉 I'm Pounce -- your official guide. I'm here to answer your questions and keep you on track for college. (Standard text messaging rates may apply.) Would you like my help?

Can I bring my dog to the dorm?

Fish are allowed in tanks no larger than 10 gallons, but all other pets are prohibited. Visit bit.ly/1SiBe6R to see what you should and shouldn’t bring.

Chatbots

Computer programs that mimic conversation with people using artificial intelligence
Implementing Pounce

- **Target sample (Summer 2016)**
  - Admitted students with a US cell phone
  - 1,948 committed to GSU
  - 5,541 admitted but not committed

- **Randomized controlled trial, stratified by GSU commitment status at time of randomization**

- **Pounce integrated with GSU student data systems**
  - Specific workflows targeted only to students who needed them
Implementing Pounce

Reduced need for human input over time
“IT’S ALIVE!”
## Pounce impacts on pre-enrollment steps & GSU matriculation

### Impacts for GSU-committed students

<table>
<thead>
<tr>
<th>Step</th>
<th>Treatment Effect</th>
<th>Control Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification hold on financial aid</td>
<td>-0.030~</td>
<td>0.178</td>
</tr>
<tr>
<td>Submit final transcript</td>
<td>0.043*</td>
<td>0.688</td>
</tr>
<tr>
<td>Attend orientation</td>
<td>0.028~</td>
<td>0.857</td>
</tr>
<tr>
<td>Immunization hold on registration</td>
<td>-0.048*</td>
<td>0.513</td>
</tr>
<tr>
<td>Complete loan counseling</td>
<td>0.063**</td>
<td>0.422</td>
</tr>
<tr>
<td>Accept loan</td>
<td>0.055*</td>
<td>0.449</td>
</tr>
<tr>
<td>Accept Stafford loan</td>
<td>0.069**</td>
<td>0.375</td>
</tr>
<tr>
<td>GSU matriculation</td>
<td>0.033*</td>
<td>0.846</td>
</tr>
</tbody>
</table>

~ p<0.10, * p<0.05, ** p<0.01
Conclusions

- Data-informed outreach helps to support students through key steps in the college-transition process
- Replace school counselors & college admissions staff with chatbots?
  - No!
  - Systems like Pounce help improve staff efficiency
  - Efficient use of data to target those who need outreach
  - Pounce: AI can handle common student questions & improve over time in doing so
- Just as self-driving cars don’t do well in bad weather, staff time saved for complex circumstances that only they can help students navigate.
Thank you.

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Paper: