Point of Tea Sales (POTS)
Ordering algorithmically suggested tea

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IRB statement

The project does not include systematic investigations. It will not collect data from Cal Poly students or employees as subjects. It does not attempt to answer research questions that contribute to generalizable knowledge. Therefore, this project does not need to be reviewed by the California Polytechnic State University Institutional Review Board.
Tate is a digital product designer who has an interest in boba tea steeped by his Asian-Californian upbringing.

For some, teahouses serve as third places and a significant aspect of Asian-American food culture — and by extension, cultural identity.

Tate’s senior project topic is the result of his interests in e-commerce/online-to-offline and his desire to share his culture.
Abstract

Teahouse customers have few opportunities to get suggestions about drinks and drink customizations.

Point of Tea Sales (POTS) fills this opportunity by providing recommendations (algorithmic suggestions) based on customer’s preferences (manually provided by customer), customer’s reviews (of previous drink orders), and reviews of other customers with similar preferences.

The scope of this senior project includes designing the user experience and user interface for the online ordering aspect of POTS.
Problem

Teahouse customers have few opportunities to get suggestions about drinks + customizations.

Teahouse customers have a wide variety of tastes and preferences.

There is high variance between similar drinks among teahouses leading to unpredictability.

Opportunity

Suggest drinks + customizations based on customers with similar tastes, normalized and combined with customers’ tastes of every other teahouse on the product.
Assumptions

Since this is a UI/UX exercise, technical and business constraints weren’t considered. From a more holistic product design perspective, these assumptions are made about the product.

Product/market fit
Industry leaders of the point of sales and payment processor space, like Square, are generalized and have massive scale to reduce costs. Teahouses are typically small businesses, and upgrading to a new system that might cost more, due to its smaller scale and market, would be a tough sell.

Excellent client onboarding & support
Given the deeper integration of this product with a teahouse (vs. other point of sales services), the product requires effective and scalable client support infrastructure and processes.

Network effect
Using data from other client teahouses to provide normalized recommendations requires a certain scale that would be difficult to achieve at first.

Customer privacy
Customers may be concerned about the privacy of the data about them this service would produce.
Objectives & success criteria

Project management
Manage each subprocess necessary to complete the overall project similarly to how a project manager would.

Measured by the completion of each subprocess and the ability for each subprocess to meaningfully influence the subsequent subprocesses.

Product creation
Design a novel product from end to end (ideation, execution, validation).

Measured by the success of deliverables: customer journey map, UI mockup & prototype, and usability testing results.

Usability
Ensure that the product is usable with usability testing.

Measured with a successful usability test where users can execute tasks. If not, design iterations will be made to meet this objective.
Timeline

Plan
Weeks 1–2
Declare project problem, objectives, scope, and constraints; competitive & industry research; plan risk mitigation strategies.

Empathize
Weeks 2–3
Identify user tasks to create a journey map; identify user and business needs and painpoints.

Design
Weeks 3–6
Design UI mockup and prototype.

Test & iterate
Weeks 6–8
Design and execute usability test of prototype; iterate prototype based on test findings.
Empathize

The customer empathy exercise was a journey map (figure 1) characterizing a typical online ordering flow.

Identified painpoints
Choosing a drink and choosing customizations was identified as high friction because the customer is unfamiliar with how a given teahouse compares to other teahouses they’re familiar with.

The current resolution of some customers is asking employees for recommendations. There are barriers to this: the employee doesn’t know the customer’s preferences, the employee could be busy, and there could be a lack of employees altogether (automated/kiosk ordering).

This can also be stressful for our customer since they might be afraid to try a new drink and risk disliking it.

Collecting feedback was also identified as a secondary painpoint, since there are few systems for providing feedback on an order at teahouses today.

Ideal state
The ideal journey map (figure 2) describes how these high-friction touchpoints are resolved by POTS.

The identified friction during the ordering stage was reduced by using algorithms to determine alignment with preference, using algorithms to showcase top/popular drinks, and providing drink and customization recommendation sets.

For feedback, an easy way to collect feedback is included. It could include a value proposition to users such as better personalized recommendations, a discount, and improving drink recipes.
Figure 1 — Journey map current state

Figure 2 — Journey map ideal state

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Design

See the interactive prototype: tty.ng/pots

Figure 3 — Drink customization UI
Jasmine tea
Green tea infused with jasmine flowers to create a lightly floral taste and aroma.

How were your drinks?
Earn 1% off for each question answered.
Your feedback helps us recommend drinks you’ll love and perfect our recipes.

Preferences based on 3,390 reviews

- ✔ House creamer 50%
- Oat milk 20%
- Whole milk 30%

We think you’ll love 75%
based on your reviews and other customers with similar taste to you.

Sweetness level
Preferences based on 3,401 reviews

<table>
<thead>
<tr>
<th>Sweetness level</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% 27% 36% 18% 14%</td>
</tr>
<tr>
<td>0 25 50 75 100</td>
</tr>
</tbody>
</table>

Place order
Cancel

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Figure 4 — Selected UI snippets
See the interactive prototype: tty.ng/pots
Validate & iterate

Usability tests were conducted to validate the usability of the prototype.

Hypotheses

Customers understand algorithmic suggestions.
Customers can customize their drinks.
Teaprint onboarding educates customers about cross-business recommendations.

Figure 6 — Usability testing artifacts: click heatmaps
Of six usability tests completed, four had usable data (two tests had critical testing-related technical issues). The participants were sourced from peers (college-aged friends).

**Findings**
Customers expect the graph part of the graph selector to be tappable.

Teaprint onboarding didn’t do a good enough job at explaining what Teaprint does.

There’s an opportunity to provide more crowd-driven reviews + recommendations to help customers make decisions.

**Iteration**
Made graph in the graph selector tappable.

Improved copy for Teaprint onboarding.

Rich reviews + recommendations were out of the project scope.
Results

The project was successful in fulfilling the objectives proposed.

Product management
Measured by the completion of each subprocess and the ability for each subprocess to meaningfully influence the following subprocesses.

Result: Processes were successfully completed in the correct order and process results were used to inform subsequent processes.

Product creation
Measured by the success of deliverables: customer journey map, UI mockup & prototype, and usability testing results.

Result: The deliverables and design process were completed in full.

Usability
Measured with a successful usability test where users can execute tasks. If not, design iterations will be made to meet this objective.

Result: The product was usable and minor improvements were made following testing.

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