

# Savvas Dimitrios Petridis

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<b>Education</b>	<b>Columbia University</b> , New York, NY USA PhD, Computer Science <i>Research Area:</i> Human-AI Interaction, HCI, AI, NLP <i>Thesis:</i> Designing Exploratory Search Systems that Stimulate Memory and Reduce Cognitive Load <i>Advisor:</i> <a href="#">Lydia B. Chilton</a> <i>Committee:</i> <a href="#">Michael Terry</a> , <a href="#">Nicholas Diakopoulos</a> , <a href="#">Eugene Wu</a> , <a href="#">Brian A. Smith</a>	October 2022
	MS, Computer Science (completed during PhD) BA, Computer Science GPA: 3.78/4.0, Dean's List all semesters	May 2018 May 2017
<b>Research Experience</b>	<b>Google People + AI Research (PAIR) / DeepMind</b> <i>Visiting Research Scientist (PostDoc)</i> with Carrie J. Cai and Michael Terry <ul style="list-style-type: none"><li>Developed and led research on (<a href="#">ConstitutionalExperts</a>, ACL 2024), an automatic method for improving prompts via fine-grained edits of principles and mixture of experts.</li><li>Developed (<a href="#">ConstitutionMaker</a>, IUI 2024), a method for interactively improving LLM prompts via natural language feedback.</li><li>Led research on and helped develop (<a href="#">MobileMaker</a>, in submission at VL/HCC 2024) a tool for rapidly prototyping mobile, generative AI applications.</li><li>Developed (<a href="#">PromptInfuser</a>, DIS 2024), a Figma plugin which enables designers to quickly create <i>functional</i> AI prototypes, by connecting LLM prompts to UI elements.</li><li>Helped design and build (<a href="#">LinguisticLens</a>, VIS 2023) an interactive tool for visualizing the diversity of LLM-generated datasets.</li></ul>	November 2022 - now
	<b>Columbia University</b> <i>PhD Candidate</i> with Lydia B. Chilton <ul style="list-style-type: none"><li>Developed an interactive tool that uses a large language model (LLM) to generate angles for journalists given a press release (<a href="#">AngleKindling</a>, CHI 2023).</li><li>Designed and developed an interactive web tool, which enables novice designers to explore a word-association network to find multiple, diverse visual symbols for abstract concepts (<a href="#">SymbolFinder</a>, UIST 2021).</li><li>Conducted a study on Mechanical Turk to understand how people interpret complex visual messaging, like visual metaphors, and distilled four types of errors in their interpretations (Creativity &amp; Cognition 2019).</li><li>Developed and studied an interactive web tool, which helps novice designers create visual blends, images that combine symbols to convey a greater meaning (<a href="#">VisiBlends</a>, CHI 2019).</li></ul>	September 2017 - October 2022
	<b>Spotify</b> <i>Research Intern</i> with Nediya Daskalova, Sarah Mennicken, Sam Way, Paul Lamere, & Jenn Thom. <ul style="list-style-type: none"><li>Designed and developed a web tool that helps users understand and explore a music genre by generating a personalized artist-graph with guide. (<a href="#">TastePaths</a>, IUI 2022).</li></ul>	Summer 2021

## Adobe Research

*Creative Intelligence Lab Intern*

Summer 2019

with Valentina Shin, Joy Kim, Mira Dontcheva, & Karrie Karahalios.

- Studied how audio can be used to animate graphics. Created a web-prototype interactive storybook, where the graphics could be animated by the reader's voice in real-time. Conducted a pilot study, with a few parents and their kids, to understand how users would interact with such a book.

## IBM

*Research Intern*

Summer 2017

with Seraphin Calo and Maroun Touma.

- Created an interactive web-tool to experiment with different features to train a suite models designed to classify devices communicating in a wireless network. Users could specify different models, parameters, and features to include, as well as the training and test set.

*Research Intern*

Summer 2016

with Seraphin Calo and Maroun Touma.

- Scraped data from multiple online newspapers and blogs to train models designed to classify the political bias of news articles.
- Designed and developed an interactive web-based strategy game end-to-end in order to study how individuals make complicated decisions.

## Wireless & Mobile Networking Lab at Columbia University

*Undergraduate Research Assistant*

June 2015 - February 2016

with Prof. Gil Zussman.

- Developed an interactive web-based application, which demonstrates the efficacy of feedback node selecting algorithms in a WiFi multicast network. Featured: **NYC Media Lab Summit (won second best demo)**, IEEE Local Computer Networks conference, IEEE INFOCOM16, and the GENI NICE conference.

## Publications

**Savvas Petridis\***, Benjamin Wedin\*, Ann Yuan\*, James Wexler, Nithum Thain. "ConstitutionalExperts: Training a Mixture of Principle-based Prompts." ACL 2024. \* denotes equal contribution.

**Savvas Petridis\***, Michael Xieyang Liu\*, Alexander J. Fiannaca, Vivian Tsai, Michael Terry, Carrie J. Cai. "In Situ AI Prototyping: Infusing Multimodal Prompts into Mobile Settings with MobileMaker." *In Submission at VL/HCC 2024*. \* denotes equal contribution.

**Savvas Petridis**, Benjamin Wedin, James Wexler, Aaron Donsbach, Mahima Pushkarna, Nitesh Goyal, Carrie J. Cai, Michael Terry. "ConstitutionMaker: Interactively Critiquing Large Language Models by Converting Feedback into Principles." IUI 2024.

**Savvas Petridis**, Michael Terry, Carrie J. Cai. "PromptInfuser: How Tightly Coupling AI and UI Design Impacts Designers' Workflows." DIS 2024.

Emily Reif, Minsuk Kahng, **Savvas Petridis**. "Visualizing Linguistic Diversity of Text Datasets Synthesized by Large Language Models." VIS 2023.

**Savvas Petridis**, Michael Terry, Carrie J. Cai. "PromptInfuser: Bringing User Interface Mock-ups to Life with Large Language Models." CHI 2023 LBW.

**Savvas Petridis**, Nicholas Diakopoulos, Kevin Crowston, Mark Hansen, Keren Henderson, Stan Jastrzebski, Jeffrey V. Nickerson, Lydia B. Chilton. "AngleKindling: Supporting Journalistic Angle Ideation with Large Language Models." CHI 2023.

Sitong Wang, **Savvas Petridis**, Taeahn Kwon, Xiaojuan Ma, Lydia B. Chilton. "Pop-

Blends: Strategies for Conceptual Blending with Large Language Models.” CHI 2023.

**Savvas Petridis**, Nediya Daskalova, Sarah Mennicken, Samuel F. Way, Paul Lamere, Jenn Thom. “TastePaths: Enabling deeper exploration and understanding of personal preferences in recommender systems”. Intelligent User Interfaces (IUI) 2022.

**Savvas Petridis**, Hijung Valentina Shin, Lydia B. Chilton. “SymbolFinder: Brainstorming Diverse Symbols using Local Semantic Networks”. UIST 2021.

**Savvas Petridis**, Lydia B. Chilton. “Human Errors in Interpreting Visual Metaphor”. Proceedings of the 2019 on Creativity and Cognition, 187—197, 2019.

Lydia B. Chilton, **Savvas Petridis**, Maneesh Agrawala. “VisiBlends: A Flexible Workflow for Visual Blends”. Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 2019.

Tariq Alhindi, **Savvas Petridis**, Smaranda Muresan. “Where is your Evidence: Improving Fact-checking by Justification Modeling”. Proceedings of the First Workshop on Fact Extraction and VERification (FEVER) at EMNLP, 2018.

Lydia B. Chilton, **Savvas Petridis**, Maneesh Agrawala. “An Interactive Pipeline for Creating Visual Blends”. The 31st Annual ACM Symposium on User Interface Software and Technology Adjunct Proceedings, 188—190, 2018. (Demo)

Varun Gupta, Raphael Norwitz, **Savvas Petridis**, Craig Gutterman, Gil Zussman, Yigal Bejerano. “AMuSe: Large-scale WiFi video distribution-experimentation on the ORBIT testbed”. IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPs), 2016. (Demo)

Varun Gupta, Raphael Norwitz, **Savvas Petridis**, Craig Gutterman, Gil Zussman, Yigal Bejerano. “WiFi Multicast to Very Large Groups-Experimentation on the ORBIT Testbed”. IEEE LCN, Oct. 2015. (Demo)

## Mentoring Experience

### Advised

[Sitong Wang](#) (MS at Columbia), now PhD student at Columbia.

[Terry Kwon](#) (MS at Columbia), now software engineer at Foliage.

### Thesis Committee

[Terry Kwon](#) (MS Thesis).

## Professional Service

### Paper Reviewing

ACM CHI 2021-2024, IUI 2022-2023, UIST 2022-2023, DIS 2021

### Program Committee

ACM IUI 2023

## Technical Skills

**Languages:** Python, JavaScript, HTML, CSS

**Databases:** MySQL, PostgreSQL, Neo4j

**Tools/Framework:** Flask, Django, Node.js, Keras, NumPy, spaCy, D3.js

**Familiar:** Java, C++, Matlab