### Savvas Dimitrios Petridis

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# Education Columbia University, New York, NY USA

PhD, Computer Science October 2022

Research Area: HCI, AI, NLP

Thesis: Designing Exploratory Search Systems that Stimulate Memory and Reduce

Cognitive Load

Advisor: Lydia B. Chilton

Committee: Michael Terry, Nicholas Diakopoulos, Eugene Wu, Brian A. Smith

MS, Computer Science (completed during PhD)

BA, Computer Science

May 2018

May 2017

GPA: 3.78/4.0, Dean's List all semesters

## Research Experience

## Google PAIR/Responsible AI

Visiting Researcher (PostDoc) with Carrie J. Cai and Michael Terry

November 2022 - now

- Design and developed (*ConstitutionMaker*, in submission), an interactive webtool with which users can revise LLM prompts by interactively critiquing (e.g. feedback like "ask me questions to understand my preferences prior to giving me recommendations") their outputs.
- Designed and developed (*PromptInfuser*, in submission), a Figma plugin which enables designers to quickly design and produce functional AI prototypes, by connecting LLM prompts to UI elements.
- Helped design and build (*LinguisticLens*, VIS 2023) an interactive tool for visualizing and inspecting the diversity of LLM-generated datasets.

## Columbia University

PhD Candidate with Lydia Chilton

September 2017 - October 2022

- Developed an interactive tool that uses a large language model (LLM) to generate angles for journalists given a press release (AngleKindling, CHI 2023).
- 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 (*SymbolFinder*, UIST 2021).
- 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 & Cognition 2019).
- Developed and studied an interactive web tool, which helps novice designers create visual blends, images that combine symbols to convey a greater meaning (*VisiBlends*, CHI 2019).

# Spotify

Research Intern Summer 2021

with Nediyana Daskalova, Sarah Mennicken, Sam Way, Paul Lamere, & Jenn Thom.

• Designed and developed a web tool that helps users understand and explore a music genre by generating a personalized artist-graph with guide. (*TastePaths*, IUI 2022).

#### 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 with Prof. Gil Zussman.

June 2015 - February 2016

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, James Wexler, Aaron Donsbach, Mahima Pushkarna, Nitesh Goyal, Carrie J. Cai, Michael Terry. "ConstitutionMaker: Interactively Critiquing Large Language Models by Converting Feedback into Principles." *In Submission*.

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

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, Nediyana 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 (INFO-COM WKSHPS), 2016. (Demo)

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

# Mentoring Experience

#### Advised

Experience Sito

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