

Carla Floricel

VISUAL ANALYTICS | VISUAL DATA SCIENCE | HCI | UI
PH.D. CANDIDATE · UNIVERSITY OF ILLINOIS AT CHICAGO

☎ (574) 300-9378 | ✉ cflori3@uic.edu | 🏠 carlafloricel.github.io | 📱 CarlaFloricel

Education

University of Illinois at Chicago

PH.D. IN COMPUTER SCIENCE

Chicago, IL

Aug. 2019 - present

Politehnica University of Bucharest

B.S. IN COMPUTER SCIENCE

Bucharest, Romania

Aug. 2015 - May. 2019

Work Experience

Electronic Visualization Laboratory, University of Illinois at Chicago

RESEARCH ASSISTANT

UIC, Chicago, IL

August 2019 – present

- Research on visual analytics for cohorts with cancer, biomarker, and aircraft simulation data.
- Primarily building medical visualization tools.
- Client interviewing, prototyping, design, development, evaluation.

University of Illinois Cancer Center - Diversity in Cancer Research (DICR)

RESEARCH SUPERVISOR

UIC, Chicago, IL

June 2023 - August 2023

- Co-mentored an under-represented high school student.
- Funded by an American Cancer Society Institutional Research Grant.

Computer Science Department, University of Illinois at Chicago

TEACHING ASSISTANT

UIC, Chicago, IL

2022, 2020, 2019 Fall Semesters

- Introductory programming and data visualization classes.
- Office hours, lab presentations and supervision, assignment grading.

OpenDBM, AiCure

RESEARCH INTERN

AiCure, New York, NY

June 2022 - August 2022

- Created an open source visual analytics tool for digital biomarkers.
- Client interviewing, prototyping, design, development, evaluation.

Unicredit Business Integrated Solutions

JUNIOR FULL STACK DEVELOPER

Unicredit Services, Bucharest,

Romania

April 2018 – January 2019

- Developed and tested features for the company's bank client web application.
- Development, bug solving, and data cleaning for production deployment.

Technologies and Skills

REACT, D3.JS, JS, PYTHON, PANDAS, HTML, CSS, UNITY, C#, GIT, SQL, MONGODB, ADOBE XD, DOCKER

- Coding, problem-solving, prototyping, sketching, client interviewing, teamwork, time management.

Publications / Posters

Roses Have Thorns: Understanding the Downside of Oncological Care Delivery Through Visual Analytics and Sequential Rule Mining

2023

C. FLORICEL, A. WENTZEL, A.S. MOHAMED, C.D. FULLER, G. CANAHUATE, G.E. MARAI

IEEE VIS

DASS Good: Explainable Data Mining of Spatial Cohort Data	2023
A. WENTZEL, C. FLORICEL , G. CANAHUATE, M.A. NASER, A.S. MOHAMED, C.D. FULLER, L.V. DIJK, G.E. MARAI	<i>EuroVis</i>
MouseScholar: Evaluating an Image+Text Search System for Biocuration	2023
J. T. TRABUCCO, C. FLORICEL , C. ARIGHI, H. SHATKAY, D. RACITI, M. RINGWALD, G.E. MARAI	<i>IEEE BIBM</i>
Opening Access to Visual Exploration of Audiovisual Digital Biomarkers: an OpenDBM Analytics Tool	2022
C. FLORICEL , J. EPIFANO, S. CAAMANO, S. KARK, R. CHRISTIE, A. MASINO, A.D. PAREDES	<i>IEEE VIS Biomedical AI</i>
Visual Analysis and Detection of Contrails in Aircraft Engine Simulations	2022
N. NIPU, C. FLORICEL , N. NAGHASHZADEH, R. PAOLI, G.E. MARAI	<i>IEEE VIS</i>
THALIS: Human-Machine Analysis of Longitudinal Symptoms in Cancer Therapy	2021
C. FLORICEL , N. NIPU, A. WENTZEL, G. CANAHUATE, L.V. DIJK, A.S. MOHAMED, C.D. FULLER, G.E. MARAI	<i>IEEE VIS</i>
Identifying Symptom Clusters from Patient Reported Outcomes through Association Rule Mining	2021
M. BIGGS, C. FLORICEL , L.V. DIJK, A.S. MOHAMED, C.D. FULLER, G.E. MARAI, X. ZHANG, G. CANAHUATE	<i>AIME</i>
Parameter Analysis and Contrail Detection of Aircraft Engine Simulations (Poster)	2021
N. NIPU, C. FLORICEL , N. NAGHASHZADEH, R. PAOLI, G.E. MARAI	<i>IEE VIS LDAV</i>
Visualizing Symptom Development During Head and Neck Cancer Treatment (Poster)	2020
C. FLORICEL , A. WENTZEL, N. NIPU, G. CANAHUATE, L.V. DIJK, C.D. FULLER, G.E. MARAI	<i>IEEE VIS</i>

Research Projects

Visual Analytics for Supervised Prediction of Patient Symptoms	<i>UIC, Chicago, IL</i>
GRADUATE RESEARCH PROJECT	<i>April 2023 – Present</i>
<ul style="list-style-type: none"> • Visualization system for designed to predict symptoms after the completion of cancer treatment. • Analysis of longitudinal treatment toxicity and model building. 	
Image+Text Search System for Biocuration	<i>UIC, Chicago, IL</i>
GRADUATE RESEARCH PROJECT	<i>June 2023 – Aug 2023</i>
<ul style="list-style-type: none"> • Evaluation and maintenance of search interfaces for mouse gene expressions. • Maintaining an active learning system for searching and labeling documents using figures. 	
Visual Analytics for Treatment Comparison Based on Longitudinal Symptoms	<i>UIC, Chicago, IL</i>
GRADUATE RESEARCH PROJECT	<i>June 2021 – March 2023</i>
<ul style="list-style-type: none"> • Visualization system for predicting symptoms after the completion of cancer treatment. • Analysis of longitudinal treatment toxicity using sequential rule mining. 	
HCI Evaluation of Visual Analytics System	<i>UIC, Chicago, IL</i>
HCI METHODS CLASS PROJECT	<i>Feb 2023 – Apr 2023</i>
<ul style="list-style-type: none"> • User study for evaluating a visual analytics system for model builders in oncology. • Qualitative and quantitative methods to evaluate user experience, use, non-use, and trust. 	

Visual Analytics Tool for Digital Biomarkers

SUMMER INTERNSHIP RESEARCH PROJECT

AiCure, New York, NY

June 2022 – August 2022

- Interface for the OpenDBM open source project analyzing both individuals and cohorts.
- Visual analysis of digital biomarkers extracted from audio and video sources.

Visual Analytics of Global Fishing

VISUAL ANALYTICS CLASS GROUP PROJECT

UIC, Chicago, IL

Sep 2021 – Dec 2021

- Visual Analytics of illegal, unreported, and unregulated (IUU) fishing around the globe.
- Detection of IUU based on longitudinal vessel activity.

High-performance Computing and Data-driven Modeling of Aircraft Contrails

GRADUATE RESEARCH PROJECT

UIC, Chicago, IL

November 2020 – June 2022

- Visualizing contrail formation from aircraft simulations.
- Visual analysis for I/O simulation parameters and ensemble members.

CAVE2 Airport Control Simulator

GAME DESIGN CLASS GROUP PROJECT

UIC, Chicago, IL

March 2020 – May 2020

- Airport control simulator for a large-scale virtual-reality environment.
- Designed and developed for CAVE2 at EVL.

Visualizing Symptom Development for Head and Neck Cancer Patients

GRADUATE RESEARCH PROJECT

UIC, Chicago, IL

January 2020 – April 2021

- Visualization system for head and neck cancer cohort analysis.
- Analysis of symptom clustering using association rule mining and symptom development.

vINCI: Clinically-Validated Integrated Support for Assistive Care and Lifestyle Improvement, the Human Link

BACHELOR'S THESIS

Politehnica University

Bucharest, Romania

December 2018 – May 2019

- Designed, tested, and developed an interface for improving older adults' QoL using IoT.
- Second prize for best research project presentation at a Politehnica University competition.

Talks and Presentations

Oct 2022	Opening Access to Visual Exploration of Audiovisual Digital Biomarkers: an OpenDBM Analytics Tool , Presented during the IEEE VIS 2022 Visualization in Biomedical AI Workshop	<i>Oklahoma City, OK</i>
Sept 2022	OpenDBM Summer Internship , Virtually presented my experience and results to the company at the end of my internship	<i>AiCure, NY</i>
April 2022	THALIS:Human-Machine Analysis of Longitudinal Symptoms in Cancer Therapy , Poster presented during the CRA-WP Grad Cohort for Women Workshop	<i>New Orleans, LA</i>
Oct 2021	THALIS:Human-Machine Analysis of Longitudinal Symptoms in Cancer Therapy , Paper presented during one of the IEEE VIS 2021 satellite events.	<i>Chicago, IL</i>
May 2021	A personal experience: the doctoral program in the USA , Presented graduate study opportunities in the USA for Romanian students	<i>Politehnica University Bucharest, Romania</i>
Feb 2021	Visual Analysis of Patient Timelines , Ph.D. Qualifier Examination	<i>UIC, Chicago, IL</i>

Volunteering

IEEE EuroVis 2022, IEEE VIS 2022 - 2023, CGF 2023

PAPER REVIEWER

2022, 2023

- Reviewed full papers.

IEEE VIS 2021, 2022, 2023

STUDENT VOLUNTEER

2021, 2022, 2023

- Revised presentation videos and moderated online platforms.
- Moderated in person sessions and helped with conference registration.
- Student volunteer captain in 2023.

Electronic Visualization Laboratory

STUDENT VOLUNTEER

September 2019 - Present

- Conducted student visits, conducted demos for students with the lab's technologies.
- Presented my research projects to faculty candidates.