

Georgia Channing

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EDUCATION

University of Tennessee, Knoxville

BSc. Computer Science, Summa Cum Laude

Knoxville, TN

Aug. 2017 – May 2022

ETH Zürich

Informatik Bachelor's Thesis, 5.75/6.0

Zürich, CH

Feb. 2019 – Jul. 2019

EXPERIENCE

Staff Researcher

Global Computing Lab

Jun. 2022 – Present

Knoxville, TN

- Primary researcher on NSF-funded project developing tools to analyze neural networks and optimize neural architecture search workflows.
- Recruit and manage undergraduate research students.

Data Scientist

Center for Advanced Defense Studies

Jul. 2020 – Jun. 2022

Washington, D.C.

- Managed the ETL pipeline: collecting sensitive and publicly available data, parsing and formatting data for further processing and visualization, and pipe-lining into the C4ADS proprietary data lake and AWS.
- Used NLP, computer vision, and auto-encoders for lead generation and target identification.
- Taught others to integrate novel data tools into their own analytical pipelines while managing a team of nine data and foreign language consultants.

AWARDS & HONORS

Grace Hopper Celebration Speaker

Association of Computer Machinery

Sep. 2022

Distinction in Undergraduate Research

University of Tennessee, Knoxville

May 2022

Excellence in Undergraduate Research

University of Tennessee, Knoxville

May 2022

AAAI-22 Undergraduate Consortium Scholar

Association for the Advancement of Artificial Intelligence

Feb. 2022

NSF Research Experience for Undergraduates

University of California, Berkeley

Summer 2021

Grace Hopper Scholar

Association of Computer Machinery

Sep. 2021

ACTIVITIES

UTK Sysfers

President

Aug. 2017 – Present

Knoxville, TN

- President of Sysfers, the University of Tennessee's organization for promoting and retaining women in computing. Involvement began as a member in 2017, mentor in 2019, Director of Mentorship in 2021, and President in 2022.
- Organize tutoring, mentor-mentee pairings and events. Teach resume and cover letter writing workshops for undergraduate members. Connect undergraduates with STEM volunteer opportunities for middle- and high-school students.

Google Summer of Code

Open Source Contributor at SageMath

Summer 2022

Virtual

- Worked under the supervision of Prof. David Coudert at Centre Inria d'Université Côte d'Azur to implement Gabow's Packing Arborescence Algorithm in Cython.
- Worked with SageMath infrastructure to integrate new code, including documentation and testing.

New Horizons in Theoretical Computer Science

Jun. 2022

Toyota Technical Institute at Chicago

Virtual

- Selected for New Horizons in theoretical computer science, a week-long online summer school introducing state-of-the-art research areas in the area of theoretical computer science and their applications.
- Attended small talks and workshops given by Rediet Abebe, Antonio Blanca, Yael Kalai, Gillat Kol, and Samory Kpotufe.

Hack4Impact UTK

Aug. 2021 – Jun. 2022

Project Manager

Knorville, TN

- Project manager for volunteer project to support the Appalachian Community Fund.
- Managed a team of six developers and two designers to create a sustainable base of resources in order to support Appalachian community-led organizations seeking to overcome and address issues of race, economic status, gender, sexual identity, disability, and the environment.

FourthBrain AI

Mar. 2021 – Jun. 2021

FourthBrain AI by Andrew Ng

Virtual & San Francisco, CA

- 16-week intensive boot camp with final industry project to ensure transfer learning capabilities across data and platforms, and benchmarking models and methods with respect to current industry standards.
- Applied ML and DL methods in scalable, optimized solutions for production-ready environments.

Algorithms Awareness Project

Oct. 2020 – Present

Founder

Washington, D.C.

- Founded a non-profit to educate young people about the importance of data ethics and machine learning fairness.
- Manage a three-person team that writes lesson plans for high school teachers, curates resources for adult learners, and hosts events.
- Awarded \$5,000 in grant funding to expand AAP's team and offerings.

PROJECTS

Spectral DefocusCam | *Compressive Hyperspectral Imaging from Defocus Measurements* Jun. 2021 – Aug. 2021

- Project associated with NSF Fellowship with Berkeley's Computational Imaging Lab.
- Optimized and democratized remote sensing by designing a tunable lens with a rapidly changing focus to reconstruct single-dimensional images to 31-dimensional hyperspectral volumes. See [code here](#) and [poster here](#). Extended abstract published in AAAI-22.

Bachelor's Thesis | *Machine Learning for Cardiac Arrhythmia Prevention*

Feb. 2019 – Jul. 2019

- Used respiratory rates to predict cardiac arrhythmia in hospital patients. Programmed with SQL, Python, and sci-kit learn to implement a Random Forest Classification model with the MIMIC-III database. The model achieved, at its best, an accuracy of 0.98 and F1-score of 0.97 in the prediction of cardiac arrhythmia.
- Received a score of 5.75 out of 6, the highest possible score one can receive without a letter of exemption from the Thesis Office.
- Supervised by Dr. Walter Karlen at ETH Zürich. See [code here](#) and [paper here](#).

PUBLICATIONS

- [1] **Georgia Channing**. "Spectral DefocusCam: Compressive Hyperspectral Imaging from Defocus Measurements". In: *Proceedings of the AAAI Conference on Artificial Intelligence* 36.11 (June 2022), pp. 13128–13129. DOI: 10.1609/aaai.v36i11.21700.
- [2] Ria Patel, Ariel Rorabaugh, Paula Olaya, Silvina Caino-Lores, **Georgia Channing**, Catherine Schuman, Osamu Miyashita, Florence Tama, and Michela Taufer. "A Methodology to Generate Efficient Neural Networks for Classification of Scientific Datasets". In: *Proceedings of the IEEE International Conference on e-Science* 18 (Oct. 2022), pp. 1–2.

SKILLS

Foreign Languages: German (C1), Mandarin (C1), Russian (B2), Spanish (B2)

Coding Languages: Python, C/C++, SQL (Postgres), PySpark, Scala

Memberships: Society of Women Engineers (SWE), Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM)