

Madeline Briere

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EDUCATION

DUKE UNIVERSITY

BSE IN ELECTRICAL & COMPUTER
ENGINEERING

BS IN COMPUTER SCIENCE

Dean's List (All Semesters)

May 2019 | Durham, NC

GPA: 4.0 / 4.0

OXFORD UNIVERSITY

SCIENCE, ETHICS & SOCIETY

SUMMER PROGRAM

Summer 2016 | Oxford, England

SKILLS

TOPICS

Software Design & Development

Ranking Infrastructure

Information Retrieval & SEO

Data Structures & Algorithms

Machine Learning

Computer Architecture • Signal Processing
Computer Security • Operating Systems
Microelectronic Devices • Automated Trading
NLP • Psychology • Linguistics • Genetics

LANGUAGES

Java • C++/C • SQL • Matlab • Bash

Borg/GCL • Python • HTML • CSS

JS • Arduino • \LaTeX • XML • MIPS

SOFTWARE/TOOLS

jUnit & jMock • Tensorflow • Flume

Boq • AWS • Jenkins • Git • Maven

Spring • Angular • Docker • CAD

PreForm • MakerBot

OUTREACH

CURRENT

DTech Scholar & Mentor

Duke Alumni Interviewer

CT Invention Convention Mentor

Google gMentor & Intern Host

Grace Hopper Conference Volunteer

COLLEGIATE

Girls Engineering Change (Exec)

Animal Welfare Society (PAWS)

LINKS

Personal: madelinebriere.com

Github:// [madelinebriere](https://github.com/madelinebriere)

LinkedIn:// [madelinebriere](https://www.linkedin.com/in/madelinebriere)

EXPERIENCE

GOOGLE | SENIOR SOFTWARE ENGINEER

September 2019 - Present | Mountain View, CA

- Leading ranking infrastructure improvements and acting as owner of internal search debug (used daily by 1200+ engineers)
- Optimizing ranking systems, saving 40+ SWE-years/year in latency for Google
- Designing ranking anomaly detection, mitigating 100+ Search outages
- Promoting Googleyness as owner of "How Search Ranking Works" documentation, leader of "Intro to Ranking" course, and technical interviewer

GOOGLE | SOFTWARE ENGINEERING INTERN

May 2018 - Aug 2018 | Mountain View, CA

- Redesigned the current backend representation of travel-related events (bookings, web searches, etc.) for the Travel User State team
- Mitigated catastrophic pipeline failure with minimal team guidance

FITCH & CO. | SOFTWARE ENGINEER

Spring 2018 - Spring 2019 | Duke University, NC & MIT, MA

- Co-founded an automated trading startup alongside 7 specialists, seeking to develop a novel approach to trading using interchangeable algorithmic strategy
- Developed a robust API capable of handling trading requests sent via the strategy component of the system (award-winning design; see [here](#))

MARVIN AI SYSTEMS LLC | SIGNAL PROCESSING SPECIALIST

Spring 2017 - Spring 2020 | Duke University, NC & MIT, MA

- Supported a voice-based computing startup, a focused competitor to Amazon's Alexa targeting high accuracy for a smaller state-space of communications
- Formulated the system's novel software neural network toolkit (see [here](#))

ZUORA | SOFTWARE ENGINEERING INTERN

May 2017 - Aug 2017 | San Mateo, CA

- Collaborated with Facebook software engineers to extend the open source distributed SQL query engine Presto in Zuora's analytics engine
- Developed automated SQL unit tests (with Jenkins) for multiple REST APIs

DUKE COMPUTER SCIENCE DEPARTMENT | TEACHING ASSISTANT

Fall 2016 - Spring 2019 | Duke University, NC

- Selected as one of the first female Teaching Assistants in Software Design & Implementation after one year teaching Data Structures & Algorithms
- Mentored ~5 students in biweekly code reviews to foster good coding habits

AWARDS

2023	1/16	Google's Doc Champion for Search Quality Documentation
2022	1/30	Google's Gold Perfy Award for Latency Savings
2019	1/6	Graduating with Departmental Distinction (see here)
2019	1 st /2k	Charles Ernest Seagle Memorial Award (see here)
2019	1 st /2k	Walter J Seeley Scholastic Award (see here)
2019	Exec	Tau Beta Pi Honor Society (see here)
2018	1 st /30	ECE Independent Study Poster Session (see here)
2017	1 st /50	Zuora Intern Career-Building Competition
2017	1 st /30	Zuora Q2 Hack-a-Thon (intern-only team)
2015	1/50	Angier B. Duke Merit Scholar (full academic support; see here)