GEOFFREY LU

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EDUCATION

Williams College | Williamstown, MA — Aug. 2016 - Jun. 2020
Bachelor of Arts in Computer Science, Dean's List
Relevant Coursework: Advanced Algorithms, App Development, Distributed Systems, Human-Computer Interaction Computer Organization, Programming Languages, Real Analysis, Operations Research, Abstract Algebra

SKILLS

Backend Python | Java | JavaScript | ObjectScript | C | Clojure | Hadoop | SQL | MongoDB
Frontend React | React Native | HTML | CSS | jQuery
Languages English (Native) | Mandarin Chinese (Fluent)

EXPERIENCE

InterSystems Corporation | Full-Stack Developer — *Cambridge, MA* | Jul. 2020 - present
- Develop efficient solutions front-to-back for TrakCare, a medical records software; develop & maintain unit tests
- Utilize InterSystems IRIS, a high-performance data platform, and AngularJS-based frameworks
- Work with cross-functional team under agile methodology to adapt development to product goals & user needs
- Contribute to and participate in group-wide developer knowledge-sharing

Yale University | Bioinformatics Research Fellow — *New Haven, CT* | Jun. 2019 - Jul. 2019
- Accepted to selective NSF-funded Sackler REU program at Yale University
- Learned genomic research techniques while working on analysis of psychiatric disorders

Summer Science Program | Computational Biology Fellow — *Williamstown, MA* | Jun. 2018 - Aug. 2018
- Used dynamic programming algorithms to model thermodynamics of RNA folding
- Implemented reliable software pipelines in Python and R to test multiple hypotheses on RNA state transitions

Williams C.S. & Math Departments | Teaching Assistant — *Williamstown, MA* | Jan. 2017 - Jun.2020
- Led office hours and graded assignments for Computer Science and Math courses
- Courses: Data Structures, Algorithms, Abstract Algebra, Diving into the Deluge of Data

PROJECTS

COVID-19 Location Density Prediction — Feb. 2020 - Jun 2020
- Prototyped a mobile application using React Native that provides users with localized crowd densities
- Intended to make social distancing easier during the pandemic and foster hyperlocal communication
- Used MapReduce to create localized predictive models using traffic data acquired from SafeGraph
- Configured AWS EC2 clusters to run algorithms, read-write from MongoDB database

Hearthstone Game — Feb. 2020 - Jun 2020
- Implemented working replica of internet game, Hearthstone, using Clojure
- Gained fluency with functional programming through implementing complex backend logic, UI, and unit tests

ARM-like Interpreter — Dec. 2017
- Implemented from scratch an interpreter for an ARM-like reduced instruction set language
- Written using an Intel-like complex instruction set (developed at Williams for academic purposes)
- Optimized the interpreter for speed (minimizing instructions used) and size (minimizing memory footprint)

Personal CuraTour — Dec. 2017
- Designed and prototyped a smatchwatch-based museum guide using InVision for the Williams Art Museum
- Performed thorough user research, including contextual inquiries and interviews, to inform design

AWARDS & ACTIVITIES

Awards American Invitational Mathematics Exam Qualifier | Biochemistry & Mol. Bio Class of 1960 Scholar
Activities Williams Men's Crew | Lehman Coummunity Engagement Board Member