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 | ObjectScript | C | Clojure | Hadoop | SQL | MongoDB
Frontend   React | React Native | JavaScript | HTML | CSS | jQuery | AngularJS

EXPERIENCE

InterSystems Corporation | Full-Stack Developer   *Cambridge, MA* | Jul. 2020 - present
- Develop features front-to-back for TrakCare, an electronic medical record used in 25+ countries
- Collaborate with cross-functional agile team to adapt software to customer needs
- Write & maintain unit tests, fix bugs, optimize code performance
- Contribute to knowledge-sharing and mentoring new developers
- Tech stack: InterSystems IRIS, a high-performance data platform, and AngularJS-based frontend framework

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
- 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 (RISC) 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

MISCELLANEOUS

Languages   English (Native) | Mandarin Chinese (Fluent)