IAN GATLIN

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EDUCATION

Massachusetts Institute of Technology Cambridge, MA September 2020 - May 2025
Candidate for **Master of Engineering, Computer Science** ***Class of 2025***
Candidate for **B.S. in Computer Science and Engineering — GPA: 4.6/5.0** ***Class of 2024***
Relevant Coursework: Algorithm Engineering (6.827/6.506), Software Performance Engineering (6.172/6.106), Computer Systems Engineering (6.033, 6.1800), Operating Systems Engineering (6.828/6.1810), Design and Analysis of Algorithms (6.1220/6.046), Software Systems for Data Science (6.s079)

EXPERIENCE

Kellis Lab at MIT CSAIL - HaploReg v5 May 2023 - Present
Genomics Software Developer *Cambridge, MA*

- Building HaploReg v5, a web based genomics explorer that supports a new interactive visualization tool which allows genomics researchers to dynamically investigate genome variants based on their upstream and downstream interactions, while rebuilding the underlying tool
- Designing a full stack application with Next.js with server and client side functionality to preserve performance and interactivity
- Authoring a paper for the upgraded tool that will submitted to the Nucleic Acids Research Database Issue

Pioneer Natural Resources - ML Alerts for Standpipe Pressure May 2022 - August 2022
Data Engineer, Drilling Department *Dallas, TX*

- Engineered efficient algorithms to identify and relate the drilling sub-states of a rig that performed 11 times faster than existing iterative methods
- Designed custom features by aggregating and crossing data channels in easily customizable code that can be quickly repurposed to solve other problems
- Applied wrapper methods to automate the optimal selection of weak features
- Deployed my successful random forest model with a state machine onto current drilling dashboards to save an estimated $1,000,000+ annually from mitigated standpipe pressure related issues that my tool detected early

PROJECTS

Modeling FIFA 23 for Coaching Applications Winter 2023 - Present

- Designing and training a graph convolutional network to identify how players can move to states with higher goal scoring potential by working backwards from goals to find promising game states
- Building a web application to deploy this network so users can upload film and receive coaching on their play

Robotics Final Race & City Driving - 6.141 Final Challenge Runner-Up Spring 2023

- Implemented image processing and homography to find track lanes and translate them to world frame coordinates
- Tuned PID controller for multiple speeds up to 6.0 m/s, achieved the fastest track time of the day at 32s/200m
- Developed a steering algorithm for a car following a line based on bounding box position and car state

SKILLS

Programming	Python (Pandas, TensorFlow), TypeScript (React), C, C++, Regex, SQL
Services	Next.js, Adobe Premiere Pro, Git
Other	Data Science & Analysis, Snowboarding, Windsurfing

LEADERSHIP & INVOLVEMENT

MIT Gordon Engineering Leadership Program, GEL 2 *Spring 2022 - Present*
Sigma Chi Fraternity, Risk Manager, Social Chair, Philanthropy Chair *February 2021 - Present*
MIT Ring Committee, Committee Chair *Summer 2021 - Fall 2022*
Varsity Football, Track & Field *Fall 2020 - Spring 2022*