

# Zachary Goldstein

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## Work Experience

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**Atlassian** | *Software Engineer* | *San Francisco, CA* 2023 – 2024

- Eliminated 150 million daily redundant API calls, reducing yearly feature resource cost by 70%
- Enforced FedRAMP PRGB compliance for 1200 internal repositories through a Bitbucket app
- Accelerated incident response and recovery through Terraform-managed operational resources
- Reduced team-wide PR cycle time by 40% through a real-time notification Slack integration
- Implemented several product security-enhancing features for high-priority enterprise customers

**Tufts University** | *Teaching Fellow: Machine Structure & Programming* | *Medford, MA* 2022 – 2023

- Coordinated and mentored a team of 25 undergraduate TAs to support student learning
- Assisted 180+ students during 10+ weekly office hours and examination review sessions
- Provided feedback on 50+ bi-weekly assignments to improve student outcomes by 10%
- Increased student project performance by 5% through mandatory pre-submission lint-checks

**Digital Arts Experience** | *Instructor* | *Hartsdale, NY* 2016 – 2022

- Instructed 850+ students in 80 courses on computer literacy, CS fundamentals, and CAD
- Collaborated with 60+ teachers across 3 districts to augment curricula with new technologies
- Maintained makerspace manufacturing throughput by troubleshooting and repairing equipment

## Education

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**Tufts University** | *Medford, MA* 2019 – 2023

BSE in Computer Science, concentration in Mechanical Engineering: GPA 3.72

Relevant Coursework: Algorithms, Computation Theory, Data Structures, Engineering Design, Human Computer Interaction, Introduction to Security, Machine Structure & Programming, Materials & Manufacturing, Mechanics, Parallel Computing, Probabilistic Robotics, Robotics (Graduate Seminar), Programming Languages, Thermal Fluid Systems

Awards: Magna Cum Laude, Dean's List (8x)

## Selected Projects

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**Robotic Brachiation Platform** | *Fusion 360, Python, MATLAB*

- Built standalone bibrachial platform to swing from monkey bars, most performant of 12 teams
- Implemented advanced PID controller to allow for precise open-loop actuator positioning

**Autonomous 4-axis Robotic Arm** | *Fusion 360, Python, MATLAB*

- Designed and manufactured 50+ components using manual mills, CNC waterjets, and 3D printers
- Minimized armature inertia through coupled motors and integrated slip ring for unlimited motion

**MusiCode** | *Python, OCaml*

- Produced novel markup language for accelerated musical ideation and music theory education
- Conducted quarterly interviews with target users to align product requirements with user needs

**Pacman FPGA** | *VHDL*

- Reproduced 95% of game functionality on a resource-constrained ASIC prototyping platform

## Technical Skills

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**Cloud Development**: Apollo GraphQL, AWS, React, Splunk, Spring REST

**Languages**: C, C++, Java, Kotlin, Latex, MATLAB, Python, R, SML, SQL, Terraform, TypeScript, VHDL, x86

**Software**: Adobe Creative Suite, Bitbucket, Blender, Fusion 360, Logic Pro X, SolidWorks