Leonardo Sola

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EDUCATION

Boston University Boston, MA
Master's & Bachelor's in Computer Science May 2026

- Relevant Coursework: Stream Processing, Distributed Systems, Discrete Mathematics, Probabilities in Computing, Computer Networking, Computational Fabrication, Applied Machine Learning, Algorithmic Data Mining, Embedded Systems

TECHNICAL SKILLS

Languages: Go, Java, JavaScript, Python, CSS/HTML, C, C++, Rust, Bash, OCaml
Tools & Frameworks: React.js, Node.js, pandas, scikit-learn, PyTorch, Linux, Git, Android Studio, SolidWorks
Areas: Back-End Design, Distributed Systems, Software Testing, Fabrication, Project Management

PROJECTS

EasyNote | React.js, Google Docs API

- Built a Chrome extension that takes a YouTube video and uses the AssemblyAI and Google Docs APIs to generate a Google Docs study guide.
- Engineered with two others in Python, Node.js, and React.js to connect transcription, document generation, and Chrome extension workflows.
- Earned division-winning project recognition at the BostonHacks Hackathon.

MRI-Based 3D Printed Tumor Models | Mesh Generation, 3D Printing

- Developed an end-to-end pipeline that transforms pre-segmented MRI brain scans into patient-specific, 3D-printed tumor models.
- Applied weighted piecewise interpolation and marching cubes mesh generation to produce accurate anatomical mesh structures.
- Reduced manual mesh repair from hours to under eight minutes while producing watertight shells with +/-0.2 mm surface accuracy.

Natura Scenic Route Planner | OpenStreetMap, Mapillary, OSRM

- Built a scenic route planner MVP that turns open map data and street-level imagery into a most-scenic drive between two points.
- Pulled roads from OpenStreetMap, sampled uniform points, matched samples to Mapillary images, and extracted simple scenicness cues from each image.
- Built a heatmap to score OSRM route alternatives and compare routes, coverage bounds, and rerun scenic routing without re-downloading imagery.

Datathon Predictive Model | Data Science, Pandas, Scikit-learn

- Worked with a team to use scikit-learn and pandas to analyze a dataset and extract insights.
- Applied data visualization, data preparation, model implementation, and model evaluation concepts to a real-world predictive modeling problem.

BURPG-IREC Rocket | Flight-Computer Design, Telemetry, Hardware Integration

- Collaborated to design and produce a working flight-control computer for the Boston University Rocket Propulsion Group IREC team.
- Supported ejection charge control, telemetry recording and transmitting, and parachute deployment flight-computer functions using Adafruit products and a Teensy 4.1 microcontroller.
- Conducted unit testing and debugging to help ensure the reliability and performance of the software.

WORK EXPERIENCE

Robotfun Academy Wellesley, MA
Robotics Instructor Sep. 2023 - Jan. 2024

- Taught classes of 4-6 children in 4th-8th grade robotics, including engineering and software labs using Scratch, Python, REV Robotics, and LEGO Robotics.
- Helped students apply basic physics principles and engineering design principles through hands-on robotics projects.
- Supported education and competition-style robotics work in a fast-paced classroom setting.

Rocket Club Math New York, NY
Mathematics Instructor Jul. 2023 - Sep. 2023

- Collaborated to make comprehensive K-8 math lesson plans with varying degrees of difficulty tailored to individual grades and areas of math.
- Managed streamlining file storage and organization for instructional materials.