Bartu Tunctan

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Education

Rice University Houston, TX

Bachelor of Science in Computer Science | QuestBridge Scholar *Aug. 2026 – Expected May 2030*

- **Relevant Coursework:** Intro to Computer Engineering, Computational Thinking, Algorithmic Thinking

Projects

Development Kit Hardware Projects | *C/C++, Computer Architecture* Aug. 2026 – Present

- Programmed microcontroller development boards using **C/C++** and low-level system drivers, directly manipulating memory registers, timers, and GPIO peripherals to control hardware execution
- Collaborated in an engineering team to design, debug, and validate low-level hardware-software interfaces, executing logic analysis to satisfy real-time constraints

Sightreed | *React, Next.js, TypeScript, Node.js, AWS Lambda, Supabase* Jan. 2026 – Present

- Architected a responsive full-stack web application serving **20+ active users** to grade musical rhythm, pitch, and tone through real-time audio analysis algorithms
- Deployed cloud infrastructure using an **AWS Lambda** function behind Amazon API Gateway with payload validation to defend against invalid request attacks
- Automated CI/CD pipelines via GitHub Actions and Vercel, reducing deployment build cycles by **80%** from 10 minutes to **under 2 minutes**

Battlecoin | HackRice 16 Participant | *Agile, React, TypeScript, PixiJS, Jira, UML* Sep. 2026

- Engineered a gamified interactive learning platform in **36 hours** using React and PixiJS to visualize data privacy and predictive marketing risks
- Managed agile project workflows by creating and assigning **20+ subtasks in Jira** to ensure full delivery before project deadlines

Experience

Student Tech Analyst Aug. 2026 – Present

Rice University Office of Information Technology *Houston, TX*

- Troubleshot hardware, touch panels, microcontrollers, cameras, and audio/AV infrastructure across campus classrooms, minimizing lecture disruptions
- Performed systematic diagnostics on audio feeds, projectors, and network endpoints to ensure hardware reliability

Team Member May 2026 – Aug. 2026

Burger King *Hoschton, GA*

- Optimized rush-hour operations through task delegation and inventory staging in a fast-paced environment

Awards & Leadership

QuestBridge Scholar Dec. 2025 – Present

- Selected as one of 2,550 students from 25,000+ applicants for a scholarship recognizing high-achieving, low-income high school seniors

Robotics Mentor Aug. 2025 – Dec. 2025

Legacy Knoll Middle School FIRST LEGO Robotics League *Hoschton, GA*

- Mentored 20 students over a 5-month robotics season, translating complex mechanical and programming concepts into structured engineering milestones
- Prepared the team for tournaments by reviewing designs, tracking software bugs, and troubleshooting sensors

Technical Skills

Languages: C, C++, C#, Python, TypeScript, JavaScript, HTML/CSS, Lua
Systems & Environments: Linux, Windows, Hardware Dev Kits, Computer Architecture, Embedded Systems
Frameworks & Developer Tools: React, Next.js, Node.js, React Native, Supabase, Git, GitHub, REST APIs
Engineering Practices: Testing/Debugging, Hardware/Software Integration, System Architecture (UML), CI/CD