Ryan Petschek

(203) 856-8543 | petschekr@gatech.edu | https://ryanpetschek.me

Education

Georgia Institute of Technology — Atlanta, GA   *August 2016 – May 2020*
- Major: Computer Science, concentrating in Information Internetworks and Systems & Architecture
- GPA: 3.2

Skills

Programming languages: HTML / CSS, JavaScript, TypeScript, C#, Python, Java, (proficiency in C++, Rust)
Tools: Git / GitHub, Visual Studio / Xamarin, Node.js, Android, MATLAB, Nginx, Docker, Kubernetes
Spoken languages: Fluent in German (certified by the Goethe Institute), proficient in French

Experience

HackGT Organizing Team | Co-Director   *November 2017 – Present*
- Lead HackGT, a 501(c)(4) non-profit and chartered Georgia Tech student organization, and its 60+ members in planning, preparing, and running HackGT's hackathons, tech talks, and workshops attended by thousands of students and supported by more than 40 sponsors annually.
- Build and maintain relationships with professors, administrators, and other student groups at Georgia Tech and members of industry and the Atlanta community to make HackGT's goal of promoting computer science education to students of all types and disciplines a reality.

HackGT Organizing Team | Registration and Check-In Project Lead   *October 2016 – Present*
- Developed and built open-source and scalable registration and check-in infrastructure capable of handling thousands of applications from participants, mentors, and volunteers from across the United States and around the world for HackGT events, including the Southeast's largest hackathon.
- Led coordination with other internal HackGT team members across the tech, design, communications, and operations teams to determine requirements and delegate assignments.
- Architected a free and common infrastructure for HackGT's hackathon software that is fully customizable and ready-to-use by hackathon organizers from other schools, reducing the time and financial investment required to run successful events.

Robot Autonomy and Interactive Learning Lab | Research Assistant   *May 2017 – August 2017*
- Assembled a cohesive and easy-to-use set of software tools that allows robots to learn from demonstrations by nonexpert users to accomplish tasks.
- Implemented an advanced object recognition pipeline that allows a robot to observe and adapt to changes in an object's position and orientation without requiring additional training data.

Greens Farms Academy | Contracted Software Developer   *February 2014 – March 2018*
- Awarded contract by school administration to design and develop a web application that allows 375+ upper school students and faculty to register, view their schedules, and provide feedback for an all-day symposium consisting of 12th grade research presentations on global issues and scientific research.

Projects

Hackathon Projects
- Won "Best Use of Encryption" prize at **HackGT 3** with end-to-end encrypted personal information storage tool, PanID.
- Won 2nd place at **HoloHack ATL** with smart city AR project for Microsoft HoloLens that helps people navigate unfamiliar cities.
- Won "#1 Made from Scratch" prize at **HackMIT** with a disaster recovery and evacuation assistance platform for victims and first responders.

GT Buses – Realtime Bus Tracking Alexa Skill
- Aggregated live location data and designed an intuitive voice-based UI for requesting the estimated arrival times of Georgia Tech buses.

Beatbox – Unofficial Google Play Music Client
- Reverse engineered and reimplemented Google Play Music's undocumented API in Rust with help from similar projects written in different languages.
- Learned Rust's low-level yet powerful memory model and how to write complex networking, cryptography, and asynchronous code in it.
- Working to bring the client up to feature parity with the official client and various other implementations.

Values of Science (English 1101) – Interactive Logistics Game and Simulation
- Built an interactive game highlighting the challenges of balancing science and engineering with fiscal, political, and geographical limitations.
- Simulates FEMA's disaster exercise for a major earthquake in the Pacific Northwest and the construction of Europe's largest ongoing engineering project, London's Crossrail, and incorporates analysis written for the English 1101 class at Georgia Tech.