Tim O'Brien

786-212-9017 • ✉ timothy.c.obrien@vanderbilt.edu • 🏠 timcobrien.tech • ⊙ timothycobrien • in timothyc-obrien

Education

Vanderbilt University   Nashville, TN
Bachelor of Science   Expected May. 2021
- **Triple Major**: Computer Science | Applied Mathematics | French
- **Cumulative GPA**: 3.95/4.00 | **Computer Science GPA**: 4.00/4.00
- **Relevant Coursework**: Algorithms | Intermediate Software Design | Operating Systems | Programming Languages
- **Honors and Awards**: Clark Scholarship — given to high-achieving engineering student leaders, with a focus on service and business
  Dean's List (all semesters) | National Merit Scholarship Winner | USA Physics Olympiad Bronze

Georgia Tech Lorraine   Metz, France
Study Abroad Semester   Jan. 2020 - Apr. 2020

Work Experience

Checkbook   San Mateo, CA (remote)
Software Engineering Intern   Jun. 2020 - Aug. 2020
- Reduced startup time over 92% by using Docker to programmatically build services. Eliminated GUI, lowering RAM usage over 35%.
- Created tracking system and enabled priority shipping for over 1000 weekly mailed checks using printed barcode and digital stamps.
- Extended internal portal to send email notifications on update and added fields using React with custom parsing of Postgres database.

Foursquare - Cancelled due to COVID-19   Los Angeles, CA
Software Engineering Intern   May. 2020 - Aug. 2020

Vanderbilt University Department of Computer Science   Nashville, TN
Teaching Assistant for Data Structures and Intermediate Software Design   Aug. 2018 - Present
- Teach 150+ students elements of C++ including data structures, patterns, and the Standard Template Library.
- Grade assignments and exams for Program Design and Data Structures (Fall 2018) and Intermediate Software Design (2019-2020).

Itopia   Miami, FL
Software Engineering Intern   May. 2019 - Aug. 2019
- Built portal to allow support team secure access to cloud organizations and deployments using TypeScript, Angular, and REST API.
- Implemented read-only permissions for API requests using an OAuth 2.0 Token. Restricted access only to administrators with Firebase.
- Constructed single-page application with tailor-made datasource, server-side pagination, and filtering to clearly render cloud data.

Institute for Software Integrated Systems at Vanderbilt University   Nashville, TN
Summer Research Intern   May. 2018 - Aug. 2018
- Created decentralized application (DApp) using blockchain smart contracts to securely share patient histories for addiction treatment.
- Developed custom back end to support smart contract using Node and Firebase. Designed front end using React and Bootstrap.

Projects

Slide   May. 2020 - Present
- Working on computer algebra system including parsing and support for symbolic inputs with multiple forms of output in Rust.

Extracurricular Activities

VandyHacks   Nashville, TN
Content Team and Development Team   Feb. 2019 - Present
- Develop workshops and educational resources for hackers. Create websites and services supporting annual 650+ student hackathon.

Vanderbilt Student Volunteers for Science   Nashville, TN
Volunteer   Jan. 2018 - Present
- Teach hands-on science and robotics lessons to students in grades 5-8 weekly in class and after school throughout Nashville area.

Skills and Interests

Foreign Languages: Professional working proficiency in French | Limited working proficiency in Russian

Programming Languages: **Proficient**: C++ | TypeScript **Experienced**: Java | Python | Rust **Familiar**: SQL | C

Interests and Hobbies: Ultimate Frisbee | Cooking | Online multiplayer games | Poker Theory | Weightlifting