TUCKER REISIG

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EDUCATION

THE UNIVERSITY OF NORTH CAROLINA at Chapel Hill, NC   August 2018 - May 2021

Bachelor of Science in Computer Science GPA: 4.0/4.0

Dean's List: Fall 2018, Spring 2019, Fall 2019

Class Rank: 1 / 5325

Relevant Coursework: Foundations of Programming: A, Data Structures: A, Computer Organization: A, Models of Languages and Computation: A, Bioalgorithms: A, Modern Web Programming: A, Files and Databases: A, Mentored Research: A, Multi-variable Calculus: A, Discrete Mathematics: A, Introduction to Probability: A, Linear Algebra: A, Mechanics and Relativity: A.

SKILLS

Proficient: JavaScript, Data Structures, HTML/CSS, React Js, Firebase, Python, Bio-Algorithms, Bootstrap, SQL, NoSQL, Java
Intermediate: Node Js, Git/GitHub, MongoDB, C, Express Js, jQuery, Adobe XD, MIPS Assembly

EXPERIENCE

Full stack Developer   July 2020 - September 2020

The UNC CS Resume Database, used by the Department of Computer Science and their corporate partners, allows recruiters to easily query students that match a given job requirement, making the recruiting process easier in a post-Covid19 world.
- Developed the student page with **React Js**, the database structure in **Firebase**, and the endpoints for the student/recruiter pages with **Express Js**. Modified the security rules through **Firebase** and the custom authentication claim through the API.
- Designed and implemented the filtering algorithm (ANDing/ORing student attributes depending on the specific filter) to allow recruiters to query students and 'cache' previous results to reduce database reads.
- Collaborated closely with clients discussing weekly goals/progress to ensure their vision was implemented.
- Coordinated and led team meetings discussing next steps and core project requirements.

Undergraduate Researcher, CS-Bio   Fall 2020

Prior computational coursework has focused on bioinformatic algorithms created in **Python** to analyze modern biological data items, such as genome rearrangement and DNA/protein peptide sequencing.
- Developed pipelines to resolve missing kmers in CC (Collaborative Cross) MRCA strains in order to create a more reliable dataset and web app tool to assist other researchers.
- Iteratively improved the algorithms, reducing runtimes from 14 hours down to 2 hours per CC strain.
- Assembled new private CCGG (Collaborative Cross Graphical Genome) graph edges.
- Resolved 30,000 missing kmers from the first pass over the data set.

PROJECTS

Portfolio Website   Present
- Designed the website and created SVGs using **Adobe XD**.
- Implemented the design with **React Js** and **SASS** for styling.
- Utilized **React Spring** for the animated features.
- Applied the mobile first method to create a responsive interface depending the screen size.

restaurantQR   Fall 2020
- Designed to help restaurant customers order food and enjoy their dining experience during COVID-19.
- Developed the customer view for the webapp using **React Js,** the database structure within **Firebase**, and the endpoints for customers and staff members using **Express Js** and **Node Js**.
- Created the backend code to translate entire menus from a restaurant by sending chunks of 5000 characters to be translated at a single time, which prevents any data limit issues.
- Utilized 3rd Party APIs to build the functionality of the app: XYZ menus, QR Code Generator, and Google Translation (Free).

PROJECTS

Twitter Clone   Fall 2020
- Developed and designed a mock Twitter web app, using a pre-built backend.
- Built the frontend from scratch using **React Js** and **Bootstrap**.
- Important features include tweeting, retweeting, commenting, editing/deleting personal tweets, and infinite scrolling.

D&D Bros Trucking   Fall 2020
- Worked with a team of 11 members to develop a website for two veteran brothers' trucking company.
- Created the landing page for the website using **React Js** and **Bootstrap**.

College-Finder   Fall 2020
- HackNC hackathon project, built in less than 24 hours, was developed to help students find prospective colleges by allowing students to filter schools by SAT and ACT percentile scores.
- Assisted team member in learning HTML/CSS and React Js to create a first-time project.
- Implemented the filtering endpoints, created the student-view using **React Js**, set up the hosting, and directed team **Git** flow.

2048 game   Fall 2020
- Designed and implemented a version of the famous game, 2048, using **MVC** design.
- Used **JavaScript** for the game logic and **jQuery** for easy DOM manipulation, along with a hint of **Bulma** for styling.

CAMPUS & COMMUNITY INVOLVEMENT

THE UNIVERSITY OF NORTH CAROLINA | Chapel Hill, NC   2018 - Present
- **Cybersecurity Club:** weekly learning sessions, tutorials, and practice CTF hacking challenges.
- **Google Developers Group**: weekly meeting, coding jams, and projects using Firebase, Flutter, etc.
- **Web Development Club:** weekly meeting and pro bono projects for the community.
- **Men's Crew Team:** Previous member of the Chapel Hill Men's Rowing Team. Competed regionally at regattas along the East Coast. Main season practices consisted of four days on the water and two days of strength training and cardio drills.

USA BMX Tanglewood Track | Clemmons, NC   2013 - 2018
- **Young Coach Mentor**: Instructed BMX Riders in learning the basic techniques of jumping, turns, and gate starts.
- **Track Maintenance**: Worked for the track manger in preparing the track for national, state, and local races. Team member of the track rebuild of 2015, which included tearing down the old track structure and rebuilding the track to create competitive turns and straights. This update enabled Tanglewood BMX to bid on and secure additional national and regional events.

Saint Leo's Church AND Summit School | Winston Salem, NC   2011 - 2015
- **Volunteer**: Four years of community service with St. Leo's Church assisting with community dinners, Christmas tree wishes, and summer camp. Four years with Summit School focusing on Hospice and The Humane Society.

NATIONAL BMX CHAMPION

SPEEDTECH AND COASTAL RACING TEAMS | United States and Canada   2013 - 2016
- Traveled nationally for BMX, winning over 100 local, state, and national races. Two-time 1st Place North Carolina State Expert in 2013 and 2014. Canadian BMX 3rd Place Champion in 2014. Eastern DK Gold Cup 3rd Place Champion in 2015. Member of the SpeedTech BMX Team in 2014/2015 for the USA BMX Grands.
- Nationally raced in 2016 in the Bluegrass President's Cup in Louisville, KY, the Gator National in Oldsmar, FL, the Carolina National in Rock Hill, SC, and the Dixieland National in Atlanta, GA.