

Peter Koncelik

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Education

Vanderbilt University, Nashville, TN

May 2021

B.S. Computer Science, Applied Mathematics, Classics (Cumulative GPA: 3.91)

• Relevant Coursework: Intermediate Software Design, Program Design and Data Structures, Computer Organization, Discrete Structures, Digital Logic, Numerical Mathematics, Statistics and Probability, Differential Equations, Linear Algebra, Introductory Java

Work Experience

Software Engineer Intern

May 2019 - August 2019

MTD Products | eCommerce Team

Cleveland, OH

- Designed and built an extensible, full-stack web application to track online orders throughout the entire online order process, employing a RESTful API to provide previously-inaccessible information in a straightforward manner to hundreds of employees.
- Engineered backend service algorithms to provide error accountability among developers via email notifications/error tracking, and moved configuration data from exposed JSON files to secure, remote databases.
- Developed applications to synchronize database information and master product catalog, consisting of 10M+ lines of XML.
- Implemented unit testing suites and bug fixes to backend software using JavaScript testing frameworks (Mocha/Chai), reducing debugging time and accelerating a major website production deployment by over a week.
- Led design/development meetings, using design patterns and Visio to communicate complex application/software organization.

Teaching Assistant

January 2019 - Present

Vanderbilt University | Mathematics Department

Nashville, TN

- Lead weekly discussion sections for instruction, questions, and homework assistance to improve students' problem solving skills in the subjects of linear algebra and calculus.
- Hold office hours and grade weekly quizzes, homework assignments, and examinations to supplement classroom learning.

Selected Projects

MTD_Order_Lookup_Application

- Full-Stack, mobile-first web application built with Node.js, SQL Server, Oracle Db, and Express to track the backend progress of an order from online placement to shipment across all MTD order services.
- Obtains data from SalesForce, FTP Server, Epcot, COM, Payment service, and Azure Db in a well-structured JSON data object.
- React.js UI includes submission section, 'pizza tracker' with steps for displaying progress, and tabbed/parsed data per-service.

Trimap_Config_Loader (Personal)

- Algorithm developed in Node.js to load configuration data from a secure database, compatible with MySQL, Oracle, Azure Db.
- Contributed to open-source package registry npm, where it received 200+ downloads within the first week of publishing.
- Builds a nested map data structure in memory to ensure O(1) time for data lookups upon initial load, with no need for slow and cumbersome runtime database queries.

Latin_Scansion (Personal)

- C++ application that scans lines of ancient Latin poetry, such as Vergil or Catullus, for metrical patterns and schema.
- Displays the lengths of poetic 'feet' corresponding to each syllable in the Latin dactylic-hexameter line supplied by the user.

Leadership Experience

Synergy (Executive-Board/PR Chair)

September 2017 - Present

- Work with Nashville school administration to organize weekly education and mentorship services for underprivileged children.
- Lead community outreach and fundraising initiatives, raising over \$1k annually to pay off organization debt and fund transportation.

VandyApps (Lecturer/Developer)

January 2019 - Present

- Present a weekly lecture series on asynchronous programming and software development in Node.js and JavaScript to 50+ students.
- Build collaborative projects with other members in weekly meetings to refine and sharpen software development skills.

Vanderbilt Quiz Bowl (Competitor/Tournament Administrator)

October 2017 - Present

- Compete with schools across the country in Academic Trivia ranging from Literature and History to Math and Science.
- Assist in planning, arranging, and operating 5+ major High School tournaments per year throughout the Vanderbilt-Nashville area.

Technical Skills

- Languages: Proficient in C++, Node.js | Experienced in JavaScript, Java, React.js, HTML/CSS, SQL | Familiar with Matlab, Python
- Tools/Systems: Proficient in Windows, MacOS, Git | Experienced in Bash, Express, SFTP, Oracle | Familiar with MongoDB, AWS