

Michael Pavkovic

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Education

Amherst, MA	University of Massachusetts, Amherst	September 2018 – December 2021 (Expected)
<ul style="list-style-type: none">B.S. in Computer Science, College of Information and Computer Sciences; Cumulative GPA: 3.96<ul style="list-style-type: none">Courses: Programming Principles, Data Structures and Algorithms, Reasoning Under Uncertainty, Computer Systems Principles, Linear Algebra, Calculus II, Calculus III		

Work Experience

Software Engineer Intern	TripAdvisor	Summer 2019 (12 weeks)
<u>TripAdvisor Vacation Rentals (VR), Web and Backend Development</u> <ul style="list-style-type: none">Developed responsive React frontend components and Java/GraphQL backend for our new Broad Geo Page, predicted to boost user engagement and lower bounce rate by 75% compared to old, static pageReimplemented major React components using modern functional style and React hooks, reducing technical debtRebuilt mobile "Property Card" with photo carousel to highlight vacation rental photos on the mobile search page, increasing bookings and increasing time spent on our site by 10%Created a Postgres read-only store and populator job for filtering and accessing highly popular vacation rentals instantlyMentored a new full-time hire on VR Demand, significantly increasing the productivity of the team		

iOS Developer	UMass Amherst College of Education	Fall 2018 – Present
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<u>Project RAISE – Interactive Textbook iPad App</u> <ul style="list-style-type: none">Audited app for SQL injection vulnerabilities, improving security and enforcing proper use of the database APIPolished key user interactive components, allowing for an easier learning experience for students who use the appRe-implemented the image creator from the ground up using my MetalLines project, boosting student engagement <u>HARTS – iPad App for Opioid Epidemic Counselling, Recovery, and Reporting</u> <ul style="list-style-type: none">Implemented REST API interaction framework, allowing for clean, reusable networking code, saving on development timeDeveloped JSON caching system for offline use of the app so case workers could help clients outside of Wi-Fi coverageEnforced accessibility guidelines in development, enabling app to be used by anyone with vision or hearing impairment		
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Web Developer	Persomics, Inc	Summer 2018 – Fall 2018
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<u>Corporate Website</u> <ul style="list-style-type: none">Implemented company blog (Persomics.com/blog) using Jekyll Collections, and added integration with a content management system for easy future writing and edits (Netlify CMS)Wrote a custom Jekyll plugin in Ruby to index blog post topics, generate topic index pages, and find related posts; made navigating to similar articles easier and quickerCleaned up pages to load faster, and use less memory by removing unnecessary JavaScript from previous generated HTML: Load times and data usage reduced by 50%		
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Project Experience

MetalLines (2019) <ul style="list-style-type: none">Developed an iOS/macOS/tvOS computer graphics framework written in Swift and Metal (Apple graphics language)Created ability for developers to draw lines and curves on a canvas at 60 frames per secondLeverages Metal for GPU hardware accelerated matrix rendering on supported Apple devices, for smooth, lag-free drawingAdded Apple Pencil support and pressure sensitivity to provide a professional-level drawing experience KunaCalc (2018) <ul style="list-style-type: none">Designed iOS calculator app written in Swift that features a computer algebra system capable of solving algebra and calculus problemsAdded accessibility features including number readout, left hand mode, color blindness themes, and dictationMade it fully end-user programmable for infinite customization and use cases		
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Awards

<ul style="list-style-type: none">TripAdvisor Intern Hackathon Semifinalist: Placed semifinals for developing a virtual reality experience with my team, where users can see TripAdvisor reviews placed on top of businesses' buildings in a street-side view using Google MapsThird Place, St. Anselm Programming Contest: Awarded 3rd place prize for completing each problem correctlySenior Computer Science Award: Awarded Computer Science award for dedication to Computer Science in and out of the classroom, Senior year of high school		
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Languages and Technologies

<ul style="list-style-type: none">Swift, Java, React, JSX, GraphQL, JavaScript/HTML/CSS/Less, Metal, Kotlin, TypeScript, C, Ruby (Jekyll), BashmacOS, Linux, IntelliJ, Xcode, VSCode, Gradle, Fish Shell, Git Version Control, SQLite, PostgreSQL, CI/CD		
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