Rory O. Hayes
Software & Computer Engineer

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Skills

- Java, Android SDK
- HTML5, CSS3, Liquid, Jekyll
- JavaScript ES6, TypeScript, Script#

- C, C++, C#, Python, PHP
- Azure, Google Apps Script
- Git, SVN

- IOT, AVR, ESP32, Teensy, RP2040
- SPI, I2C, I2S, UART, LoRa, Mesh
- PCB design, hardware integration

Experience

Roro's Mods – Online Store (Amazon, Tindie) — *Bellevue, WA*
Owner, Designer, Developer, Director — *December 2018 – December 2022 (4 years)*

- Produced 1k+ custom PCBs for charging old electronics using USB-C; "Excellent" Customer Experience rating
- Developed 10km range mesh-network GPS device for emergency medical use at 30,000+ person events
- Designed a PCB to drive commercial HUB75 LED panels roughly 3 orders of magnitude more efficiently

Self-Employed – Side Projects — *Bellevue, WA*
Software, Computer, and Electrical Engineer — *December 2018 – December 2022 (4 years)*

- Built and hosted new websites for customers using HTML5, CSS3, JavaScript ES6, Liquid, and Jekyll
- Deep dive into Android .apk "patching"; modified existing published apps to provide new/extra functionality
- Developed immersive live style-transfer VR/AR experience using TensorFlow Lite on Android
- Collaborated with 10+ customers and partners (in person and remote) on a variety of LED art installations
- Designed new product PCB and firmware for major consumer LED company; entering mass production soon
- Designed and maintained 1kW+ solar power grids for various customers to use in extreme conditions

Microsoft Corporation (FTE) — *Redmond, WA*
Software Engineer 2 at Microsoft CRM (Dynamics 365) — *July 2013 – December 2018 (5.5 years)*

- Created new hybrid (physical/virtual) lab of ~70 devices for automated test case execution using Selenium
  - 100's of coworkers used lab to save hours of manual config testing; added suggested features
- Sole owner of all validation for entire box product, an add-on used by ~80% of our customer base
- Maintained several product codebases, including integration of new features across multiple repositories
- Brought multiple applications into GDPR compliance within extreme time crunch; preventing costly fines
- Created system to validate user customizations; non-breaking changes are core to MSFT business strategy
- Led release of a custom low-latency drone tracking solution as Chapter Lead of the Drones Maker Garage

Software Engineer in Test at Microsoft CRM (Dynamics 365)

- Led development of custom solution for emergency critical migration of 35k+ automated test case database
  - Partnered across all product teams to ensure their workflows would remain satisfied with new schema
  - Documented/presented adjustments to procedure for test case execution, reporting, and dashboards
  - Realistic timeline (~8 weeks) not an option – only had 3 weeks; completed on time with all fields verified
- Orchestrated our offshore vendor team, increased test execution throughput by ~40% to cover all supported client/OS combinations in single pass, oversaw development of new automated test cases
- Built/maintained several shared critical environments needed by team to test different customer scenarios
- Created and executed test plans for new features, and executed legacy test cases for shipping sign-offs

C.A.R.E. [501(c)(3) prev. known as Conscious Crew (USC Events)] — *Seattle, WA*
Volunteer and Stage Lead — *October 2016 – Present*

- Harm reduction non-profit which promotes health and safety in the Pacific Northwest music community
- First responder to medical emergencies at dozens of large, high-risk concerts and outdoor festivals
- Lead coordination of 100's of volunteers, ensuring the safety of 30k+ event attendees across difficult terrain

Technology Education and Literacy in Schools (TEALS) ———————— ***Issaquah, WA***
   Volunteer Teacher   ***September 2016 – May 2017 (1 year)***
   - Taught high school students AP Computer Science 3 days/week; curriculum, tests, homework, projects, etc.
   - Conceived, documented, and executed a new post-exam project for TEALS: students created an Android app to control a Drone, plot a mission course, and frame/record video footage using SDK
   - 95% of students passed exam and received college credit; 50% of students got the highest grade possible!

National Information Solutions Cooperative (NISC) ———————— ***Lake St. Louis, MO***
   Part Time Developer   ***May 2011 – December 2012 (1.5 years)***
   - Created a dashboard for customers to predict future electric load using research models, historic usage, and upcoming weather patterns; electric companies used results to anticipate future electrical grid load
   - Built internal tooling around cloud clusters; created dashboard to monitor cluster health and statistics
   - Mentored several new interns, helping them take their own projects from start to finish

Product Innovation and Engineering, L.L.C. ———————— ***Rolla, MO***
   Undergraduate Research Assistant   ***October 2010 – May 2011 (6 months)***
   - Developed an industry-grade program to slice a 3D model and generate G-code to facilitate laser deposition of powered metal, using a 6-axis robotic manufacturing arm repurposed from a car assembly line
   - Primary contact with an external consulting group we hired to develop and integrate several algorithms

Education
Missouri University of Science and Technology (Rolla, MO) ———————— ***August 2009 – May 2013 (4 years)***
B.S. in Computer Science, B.S. in Computer Engineering, Minor in Mathematics

Honors & Accomplishments
   - Life Member of Kappa Kappa Psi, the Honorary Band Service Fraternity
   - CPR, AED, and First Aid Certified
   - 2014 MSFT Hackathon project vision was recognized and developed into two full CRM product features
   - 2016 MSFT Hackathon project was awarded by Senior Leadership and demoed to U.S. DoD
   - Intern Social Club Leader (April 2014 – December 2018)
      o Helped University Recruiting organize dozens of events for 100's of interns every summer, maximizing their experience with Microsoft and Seattle and converting many to full-time
   - Head Recruiter for recruiting trips to several Midwest Universities (September 2014 – September 2016)
      o Attended career fairs, sorted resumes, conducted interviews, guest spoke/taught classes
      o Worked with campus faculty/leadership to develop ongoing relationship with Microsoft
      o Went from an average of 0 hires/year in 2013 to 19 hires/year in 2019!