Miklós Tusz

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Work Experience

May 2017 - Jul 2020

AON3D, Lead Software Developer (Flask, Django, React/Redux, Docker, Azure, Dokku, Balena)

- Designed and implemented the host control system that powers all AON3D industrial 3D printers. This manages OTA updates, displays the UI, and provides file management.
- Developed asynchronous protocol for communication between real-time firmware (AVR MCU) and backend control system (ARM Linux) over serial data lines.
- Assisted in development of system update mechanism that works entirely offline for air-gapped machines in high-security locations.
- Created a dashboard for monitoring machine status, uptime, network information, version, and machine management capabilities for non-technical staff.
- Developed hardware-specific automatic-bed leveling feature in machine firmware.
- Implemented a SAML service in the internal dashboard. This supported customer identity providers for authorization, authentication and single-sign-on.
- Provided technical support and development directly to large enterprises, research laboratories, small businesses, and government agencies.
- Coordinated with mechanical and sales teams for implementing hardware-dependent features and planning customer-requested development projects.

Nov 2015 - Jan 2017

Plotly, Fullstack Developer (D3.js, WebGL, React/Redux, Django, Vagrant, AWS)

- Core maintainer of Plotly.js, a widely used open source graphing and visualization library.
- Implemented module loading system, leveraging Webpack "tree-shaking" to allow for smaller, bundled builds containing only desired plot features as specified by the user.
- Introduced features including scrolling SVG legends, plot-domain slider-selector, and embedded plot images.
- Worked in a small team to migrate main React application data store from Flux to Redux.
- Added Jupyter notebook and Spectacle presentation support to Plotly Studio platform.

May 2014 - May 2015

Kreate Solutions, Backend Developer (Express, React/Flux, Docker, AWS)

- Created REST API's to serve various data feeds and provide user authentication.
- Aggregated content from multiple social platforms for data feed service.
- Managed web application and API server deployments using Docker and ElasticBeanstalk.

2013 - Present

Contract Development

- Developed a private website for calculating expected values and arbitrage opportunities of bets across various sports-betting markets.
- Implemented websites from static designs for brand and design agency "The Small Monsters".
- Created a PDF chart generation program using D3 that was used by the Bank of Montreal for monthly accounting reports.

Education

2010 - 2015

B.A. Economics, Concordia University, Minor in Computer Science

Skills and Interests

Languages	Python, Typescript, Rust, C, Bash, SQL, Javascript/Node, HTML, CSS/SASS
Frameworks	Django, Flask, React/Redux, Ramda, Plotly.js, Express, Yew, P5.js, WebGL
Databases	Postgres, SQLite, MySQL, Redis
Tools	GNU/Linux, Git, GPG, Make, Webpack, Docker, Dokku, AWS, Azure, Vagrant, Balena
Interests	Computer graphics, additive manufacturing, rock climbing, backcountry skiing, sailing, and discovering how and why things work.