

MANOJ PATEL (NOJ VEK)

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PERSONAL STATEMENT

I believe any great product aims to maximize the economy of the user's time, cognition and effort to get their job done. Getting it right requires multiple iterations, therefore the speed of iteration and learning is paramount.

PROFESSIONAL EXPERIENCE

Senior Software Engineer at Stripe (Seattle, Washington)

Nov 2020 – Mar 2021

Stripe (<https://stripe.com>) is building the payment infrastructure for the internet. I was on the Frontend Infrastructure team.

- Frontend devloop instrumentation to measure time from code change to code applied in the browser. Also added React HMR to various webpack configs.
- Added backend caching middleware to Ruby server based on Rack. Stripe saves 1d of productivity every week due to perf improvements.
- Flow -> Typescript migration strategy.

Senior Software Engineer at Mixpanel (Seattle, Washington)

Mar 2016 – Nov 2020

Mixpanel (<https://mixpanel.com>) is a petabyte-scale product analytics tool.

- UI Perf: Make navigation faster - 10X improvements in page load, this led to increase in customer retention.
- Design System: Built Mixpanel's Design System <https://design.mixpanel.com>. We can build consistent user experiences and also decrease time to build new feature UIs. With fewer core UI components, #little-big-things that delight users can be implemented.

- Settings: Worked on enterprise features such as admin settings, lexicon (data annotation) and query builder.
- HMR: Improved front-end devloop under 5 seconds with custom webpack hot module reloading (HMR) plugins. HMR lets us apply code changes without page reload.
- Refactor: Javascript to Typescript, Jade -> TSX, error tracking and general QOL (quality of life) improvements.
- CI: Worked on continuous integration pipeline for frontend assets and webapp server. A staging environment is built per PR (pull request).
- CD: Performance improvements via parallelisation and end-to-end smoke tests using puppeteer to ensure reliable deploys. Median deploy times are about ~30 minutes.

Software Engineer at Microsoft (Redmond, Washington)

Aug 2015 – Feb 2016

Microsoft Edge is the new lightweight browser by Microsoft. Worked on Edge Developer Tools.

- Startup performance improvements.
- Fixed various bugs and misc improvements in Dom Explorer, Console, Memory Profiler, CPU Profiler and Network tab.
- Faster and more reliable CI pipeline with end to end tests.
- Worked with Visual Studio Code team for Chrome Debugger plugin.

Software Engineer at Microsoft (Vancouver, Canada & Redmond, Washington)

Jun 2013 – Aug 2015

Power BI (<https://powerbi.microsoft.com>) is Microsoft's Business Intelligence offering.

- AngularJS frontend. Worked on the dashboard. Smooth 60FPS drag and drop, even with multiple fingers on a touch screen.
- Report visualization code with a mix of canvas and d3.
- Admin Settings UI.

Contract - Project Manager at Booking Boss (Sydney, Australia)

Jan 2013 – Mar 2013

Booking Boss (<https://www.bookingboss.com>) is a start-up company that creates an online booking management system for tourism and adventure business operators.

- Setup customer calls and gather requirements.
- Agile sprints with Kanban boards in JIRA.
- Validate acceptance criteria and prioritize action items for next sprint.

Software Engineer at RocketBoots Pty Ltd (Sydney, Australia)

Mar 2009 – Dec 2013

RocketBoots (<https://rocketboots.com.au>) is a software consultancy. Joined as employee #1 and helped grow to 11 engineers by the time I left.

- Worked on “Beehive” project. Implemented computer vision using OpenCV on embedded SOC (System on a Chip) on cameras.
- Built a machine learning system (genetic algorithm) to implement batched learning on an on-demand ~500 VM cluster on AWS. We could go from 70% accuracy to 95% accuracy in a couple of hours. This was before Convolutional Nets and GPUs were prominent for computer vision.
- Lead developer for the software of a military grade, surveillance robot “HERMES Light” .<https://www.youtube.com/watch?v=BEba5iVmlEQ>

Academic Tutor (University of New South Wales - UNSW, Australia)

Mar 2007 - Jan 2009

- Awarded highest achieving student in “Computing for Engineers” course.
- Tutored first year students while I was in my 3rd year. Introduced Engineering students to programming, logic and problem solving skills.
- Built html/css/js/Flash sites as side gigs

OPEN SOURCE

- [Nodejs PRs](#)
 - Documentation for --inspect, --debug-brk, --debug
 - Fix bug where --inspect doesn't notify profilers to disconnect.
- [VSCode PRs](#)
 - Inline values when debugging via decorators
 - Terminal links based on CWD
 - Type to focus
- [Typescript PRs](#)
 - jsxFragmentFactory compiler option
 - allowJS + declarations compiler configuration
 - Pretty jsx emit
 - Fix .d.ts declarations
- [Chrome DevTools](#)
 - Tooltips for Request Timing Metrics
 - Mouse handling to change units with keyboard modifiers
- [Chrome DevTools protocol](#)
 - Auto generated type definitions from protocol.json. Consumed by VSCode, puppeteer, lighthouse and other tools.
- [fuzzbunny](#) - Fast fuzzy matching library written in Typescript.
- [panel](#) - Web components with virtual dom
- [boomadmin](#) - MySQL db explorer with SQL builder
- [RaspberryPISelfDrivingCar](#) - fun experiment with openCV on a raspberry pi powered car.
- Misc other contributions to [webpack](#), [webpack-dev-server](#), [simd_nodejs](#), [puppeteer](#), [preact](#), [ChakraCore](#).

EDUCATION

University of New South Wales, Australia

July 2006 - Aug 2009, (Bsc Computer Science) Grade: Distinction

Major Courses:

- Computing for Engineers
- Engineering Design & Innovation
- Business Data Management
- Discrete Mathematics
- Data Structures & Algorithms
- Software Construction
- Ethics & Law for Computer Science
- Data Management & Statistical Analysis
- Microprocessors & Embedded Systems
- Algorithms & Programming Techniques
- Database Systems & Implementation
- Computer Vision
- Advanced Computer Graphics
- Software Project Management
- Rich Web Applications Engineering
- Programming Languages & Compilers