

# NICHOLAS RITCHIE

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**GITHUB:** <https://github.com/fonyx>

**PORTFOLIO:** <https://fonyx.github.io/portfolio/>

**ONLINE VERSION:** <https://fonyx.github.io/resume/>

Full stack developer with a background in engineering. Certificate in **full stack development** from the **University of Sydney**, with skills in **nodeJs**, react, **css** frame works and data persistence tools. An enterprising professional with diverse professional history and a warm interpersonal tone. Made the change from engineering to pursue an idea of visualizing career pathways as an interactive map. Built using **Django**, **d3** and **BeautifulSoup**. From this project I discovered a dormant attraction to compelling visual products and software development. With a hard science background and broad experience in hardware, I will join you with a light-hearted charm and comprehensive understanding of technical group work.

## TECHNICAL SKILLS

**LANGUAGES:** Python, JavaScript, HTML5, CSS3, SQL, LABVIEW

**APPLICATIONS:** GIT, MYSQL, POWERBI, VSCode, PyCharm, DataGrip

**TOOLS:** Django, Express, Node, Bootstrap, JQuery, PostgreSQL, Materialize, D3, Pandas, Matplotlib, Sklearn, BeautifulSoup

**THEORY:** Physics, Optics, Electrical Eng, Manufacturing Processes

## PROJECTS

**ACTOR LOOKUP APP** | [HTTPS://GITHUB.COM/FONYX/ACTORLOOKUP](https://github.com/fonyx/actorlookup) | [HTTPS://FONYX.GITHUB.IO/ACTORLOOKUP/](https://fonyx.github.io/actorlookup/)

**SUMMARY:** Front-end product using IMDb API allowing users to visually search through movie titles for a pair of actors.

**ROLE:** Project lead, primary contributor

**TOOLS:** IMDb API, Vanilla Js, HTML5, CSS3, Materialize, GITHUB Pages

**WEATHER APP** | [HTTPS://GITHUB.COM/FONYX/ACTORLOOKUP](https://github.com/fonyx/actorlookup) | [HTTPS://FONYX.GITHUB.IO/ACTORLOOKUP/](https://fonyx.github.io/actorlookup/)

**SUMMARY:** A weather app using openweather API to display weather conditions and 5 day forecast

**ROLE:** Sole author

**TOOLS:** Open Weather API, Vanilla JS, HTML5 CSS3, GITHUB Pages

## **EXPERIENCE**

### **WEB DEVELOPMENT, STARTUP**

**AUGUST 2020 MAY-2021**

- Construction of a ground up web app using Python, Django, JavaScript, HTML + CSS and Bootstrap.
- Web scraping, data wrangling and data visualization of 800+ professions.
- Implementation of user authentication system.
- Interactive graph of profession data using d3.

### **R&D Calibration Process Engineer, II-VI CORP**

**JULY 2018 TO AUGUST 2020 – LEVEL 2**

- Recognized the need, and specified problem statement for a manufacturing line dashboard for real time monitoring of production line trends, yields, and failure methods.
- Built manufacturing dashboard with Python and PowerBI to cover complete calibration process, handling 100's of unique part types at up to 500 parts per day.
- Built alerts for new failure methods and alerts for long term drift based on product type and sensitivity of parameter.
- Reporting of manufacturing floor to R&D team and CEO.
- Development of GUI tools to speed up diagnostics and report generation as a deployed service for R&D team.
- Documentation of production changes and legacy knowledge to streamline training and ease knowledge management between departments.

**JANUARY 2017 TO JUNE 2018 – LEVEL 1**

- Installation, servicing, automation and reporting on calibration processes and hardware for WSS technologies and other optical switches.
- Contributed to new product implementation that decreased production downtime by 70%.
- Construction of PostgreSQL database and PowerBI dashboard to improve product visibility, and to enable machine learning operations.

### **TEAM LEADER OIG MANUFACTURING, II-VI CORP**

**SEPTEMBER 2015 - JANUARY 2017**

- Construction and testing of ~200 wavelength management devices and optical instrumentation worth between \$4K and \$60K per unit.
- Management and training of production staff to streamline operations and maximize efficiency.

- Built 3D renders of product operation to better explain manufacturing processes to technicians.

## **EDUCATION**

FULL STACK DEVELOPMENT BOOTCAMP

APPLIED PLOTTING AND DATA REPRESENTATION IN PYTHON

APPLIED MACHINE LEARNING IN PYTHON

INTRO TO DATA SCIENCE IN PYTHON

BACHELORS IN PHOTONIC ENGINEERING

USYD (Uni of Sydney)

UOM (Uni of Michigan)

UOM

UOM

UNSW (Uni New South Wales)