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Where I Have Been?

After being let go by the same company twice due to the impact of COVID-19 and financial challenges, I decided to take control of my career. I invested my time and savings into learning Android programming using Java. Over the past two years, I have diligently studied this challenging language, which is not only used for Android devices but also widely applied in desktop computing.

During this period, I completed both free and paid Java courses, developed two Android applications, and compiled a comprehensive 630 pages document detailing everything I learned. I am currently in the process of publishing my first Android app on Google Play. I happy to see that people appreciate the app's concept, which aims to improve lives by helping users remember everything and manage their time effectively.

Web: https://securelogbook.github.io/SECURElogBook/
YouTube: https://www.youtube.com/@SECURElogBook

I have now received my first payment from Google for the first sales of my app. Although it was a tiny amount, it represents a significant achievement for me. After investing so much time and money in my personal and professional growth, the Google payment makes me very proud as not many people can create an entire product on their own.

I am now actively seeking a job that recognizes my expertise and skills in chemistry, computer science, and my capacity to manage complex tasks. I am a perpetual learner, constantly engaged in studying and creating processes and documents. My CV reflects my profound expertise in science and chemistry, as well as my knowledge of databases and programming.

I will be happy relocating.

1. WORK EXPERIENCE/EMPLOYMENT

1.1. Job title: **R+D Laboratory Technician** Company: **Verso Biosense** Duration: **March 2020 to March 2022** Location: **Oxford.**

Role:

1) Final quality control inspection on medical devices to ensure compliance with standards. Completion of quality control documentation to certify that the product is ready for shipment. Developed and managed the schedules to the delivery to the hospital and receive the product. Overseeing the final packaging process to ensure the product was safely and correctly packaged for distribution.
2) R+D manufacturing of small medical device (intrauterine device).
3) Shopping equipment and consumables for the lab.
4) Creation of systems/documents to make tasks easier and more reliable.
5) Training people.
6) Use and maintenance of 3D printers, Fused Deposition Modelling (filament) and Stereolithography (resin).
7) Soldering under microscope micro-PCB and cables.
8) Use and manipulation of resins, UV resin and medical grade silicone.
9) Responsible for chemicals and lithium batteries safety.
10) Fire warden.

Key achievements:

1) Fixed many production issues thanks to the creation of a flowchart of the entire production process using Microsoft Visio.
2) I manage to create a system to handle the tasks using Microsoft Office 365. Thanks to my IT skills and experience, I created a friendly transparent multi-user system to track tasks for the entire lab.
3) I created the shopping database program to save time to managers and money to the company.
4) Find out improvements to increase yields in the most critical process, silicone encapsulation.
5) Design and build the tool to solder microchips under the microscope.
6) I found the solution for an important soldering issue.
7) Creation of a method to fabricate a consistent reference electrode.
8) Speed up the encapsulation process, key step for fabrication.
9) Created an inventory database that does the stock automatically and shows the items location.
10) Created a database to store all the calibration/safety data for all the equipment in the lab.
11) Saved time/money by finding the right microscope and lighting system that help to handle the microchips.
12) Encapsulation moulds changes that helped to improve yields and quality while protecting the expensive moulds.
13) Developed the method to clean tiny microchips with an ultrasonic bath. I created the tools and also the SOP.
14) I found the right adhesive to bond critical parts of our product.
15) I found a method to do the chassis quality control under a microscope and I created the SOP.
16) Taking responsibility for the production of medical devices.
17) Training people.
18) 3D printer maintenance and chemical cleaning of pieces.
19) Created the method to clean medical device encapsulation moulds and the SOP for it.
20) I solved a major health and safety issue: lithium battery storage. Previously, lithium batteries were scattered everywhere. To reduce the risk of fire, I stored all batteries inside an ammunition box in a corner of the lab, away from doors and combustible materials.
21) Creation of silver micro reference electrode.

1.2. Job title: **R+D Laboratory Technician** Company: **Oxis Energy** Duration: October 2017 to March 2020 Location: **Oxford.**

Role:

1) Fabrication of lithium sulphur batteries.
2) R+D cathodes manufacturing.

Key achievements:

1) Creation of a device to study cathodes quality.
2) I used my programming skills to create a smart flexible way to match cathodes.
3) Designed a solid method to set up the Doctor blades used to coat cathodes (R+D department).
4) Created and Excel document to replace the manual calculations for cathodes formulations.
5) Person in charge of the cell sealing machine.
6) Manual construction of lithium cells.
7) Reported and help to fix an important Health and Safety issue.
8) Improvement of the lithium battery separator/membrane material production.
9) Found a way to remove ID labels without wasting time and producing less residues.
10) Health and Safety solution for air quality in labs.

1.3. Job title: **Laboratory Technician** Company: **Oxford Photovoltaics** Duration: **June 2013 to October 2017** Location: **Oxford.**

Role:

1) Carried out regular maintenance of Physical Vapour Deposition (PVD) equipment.
2) Preparation of solutions and spin-coating of substrates inside glovebox.
3) Responsible for the fabrication, cleaning and quality control of glass and silicon substrates.
4) Cleanroom and laboratory work.
5) Quality control of solar devices (electronic tests) and data entry.
6) Responsible for the portable storage system of our samples/materials.
7) High pressure cylinders and regulators handling.
8) Purchasing of lab materials and items.
9) Housekeeping laboratory tasks.
10) Support and train work colleagues.

Key achievements:

1) Created a way to generate complex patterns on solar cells using tape and laser cutter.
2) I design a smart flexible solution to cure more silicon wafers at the same time. My system was used to transport samples to a lab in Belgium.
3) Created a system to cleave silicon wafers into squares pieces with specific dimensions.
4) Increased glass substrate cleaving yield from 60% to 98+%.
5) Developed a system to clean silicon substrates.
6) Improved the manual cleaning process of glass substrates.
7) Designed and built racks and small tools using technical drawing and 3D software.
8) Thin film thickness measurement documentation.

1.4. Job title: **R+D Laboratory Steward** Company: **City Technology** Duration: **June 2005 to December 2012** Location: **Portsmouth.**

Role:

1) Lead operator of the Scanning Electron Microscope
2) Lead operator of the particle size analyser, Malvern system.
3) Person in charge of high pressure cylinders and regulators. Also, I was in charge of the high pressure gas lines and its Swagelok components (purchase and storage).
4) Person in charge of COSHH, MSDS and Scientist notebooks archive.
5) Creation of high quality cross section of samples.
6) Person in charge of lab equipment, chemicals and waste disposal.
7) Designed and implemented databases to manage chemical inventory, gas cylinders, regulators and purchase orders.
8) Managed the acquisition of R&D lab equipment.
9) Creation of SOPs.

Key achievements:

1) Received a Honeywell Bravo Award for creating a database to manage COSHH and MSDS documents, allowing all employees to access them easily.
2) Six Sigma Green Belt certificate.
3) Created a new process to better understand and reduce the time that takes to analyse the gas sensors capillaries, from 36 hours down to 15 minutes.
4) Analysis/investigation of the quality control of internal samples and from external companies.
5) High precision cross section of microscopic samples.
6) Replaced the original slow old method to collect temperature data (thermocouple) for digital USB data loggers (Tinytags).

1.5. Job title: **Factory Line Worker** Company: **Autoliv** Duration: **March 2005 to June 2005** Location: **Portsmouth.**

Role:

1) Production of airbags for Land Rover.

1.6. Job title: **Kitchen Assistant** Company: **Sinah Warren Hotel** Duration: **June 2004 to February 2005** Location: **Hayling Island.**

Role:

1) Cooking and preparing food.

1.7. Job title: **R+D Laboratory Steward** Company: **Corporación Química Vhem** Duration: **June 2000 to May 2001** Location: **Barcelona.**

Role:

1) Quality control of inorganic pigments.
2) Daily particle size analysis of pigments using a Malver System.
3) Creation of colour samples and standards.
4) Responsible for keeping track of sample storage.
5) I purchased and built the laboratory computers.

Key achievements:

1) Creation of the template to display, compare and store colour samples.
2) Fix a big data issue between companies on different continents.
3) I did fly to Basque Country with managers to visit the main company of the Nubiola group.
4) Attended an international environmental conference.

1.8. Job title: **Production Operator** Company: **Lipotec** Duration: **February 1999 to March 2000** Location: **Barcelona.**

Role:

1) Cosmetics production.

Key achievements:

1) I reported a quality issue with a very expensive product.
2) I detected a microbiological contamination in one of the products we use.
3) I did learn a lot about how to mix and dissolve chemicals.

2. EDUCATION/ACADEMIC TRAINING

2.1. Institution: **UPC Villanova**
Degree: Chemical Engineering
Level: University (not completed)
Field: Chemistry
Duration: 2001 to 2003.

2.2. Institution: **Aula de Informática**
Degree: Master in Computer Science
Level: Complementary formation
Field: Computer Science
Duration: 1999 to 2000.

2.3. Institution: **I.E.S. Mercè Rododera**
Degree: Certificate of Higher Education in Environmental Chemistry
Level: HNC
Field: Chemistry
Duration: 1997 to 1998.

2.4. Institution: **C.E. Joan XXIII (Christian private high school)**
Degree: Second Stage of Professional Formation
Level: HNC
Chemistry Field: Chemistry
Duration: 1991 - 1996 (5 years).

3. SKILLS

3.1. Chemistry

1) More than 10 years taking care of R&D labs.
2) More than 3 years of experience working in cleanrooms.
3) More than 3 years working with gloveboxes.
4) More than 2 years of experience working in dry rooms.
5) Creation of the SOPs.
6) Able to fix Health and Safety issues.
7) Wide experience mixing and handling chemicals.
8) Calibration of scales and pH meters. Maintenance of ultra-pure deionise water systems.
9) Titrations techniques, quantitative chemical analysis (wet chemistry).
10) Systematic qualitative analysis (wet chemistry).
11) Gravimetric analysis.
12) Wide experience cleaving glass and silicon wafers.
13) Cleaning of semiconductor substrates, glass and silicon.
14) Chemical etching of TCO (transparent conductive oxide) glass.
15) Creation of colour standards made of plastic (using roller press calender machine).
16) Treatment of pigments: grinding, washing, drying, …
17) Gold and carbon sputtering.
18) Wide knowledge of adhesive, epoxy resins and silicone.
19) Handling of carbon nanoparticles.

3.2. Cosmetic production

1) Capable to deal with large volumes of chemical products.
2) Fabrication of creams, gels, liposome, emulsions, masks, intermediate products, micro capsules, milli-capsules, products with silicone.
3) Ability to measure and modify the pH, viscosity and colour of cosmetics.
4) Use of mixing equipment up to 500kg.
5) Use of electric and manual pallet truck.

3.3. Microbiology

While I was a student, I did work at two different microbiological companies for a year.

1) Preparation of culture media for cells.
2) Use of autoclave and preparation of material to be sterilized.
3) Total Bacteria Count (TBC): aerobic bacteria, coliform bacteria, faecal coliforms, streptococcus faecalis, clostridiums.
4) Biochemical tests: oxidase, ß-galactosidase.
5) Analysis of chemical (COD) and biochemical oxygen demand (BOD).

3.4. Information Technology (IT)

1) Microsoft Office: Word, Excel, Access, PowerPoint, OneNote, Teams, Visio.
2) Programming languages: Java (Android), Visual Basic, HTML, Visual C++, ...
3) Databases: SQLite, Android ROOM, Microsoft Access, Microsoft SQL server.
4) Design: Blender, DraftSight, AutoCAD, 3D Max.
5) Image editing: Photoshop, Gimp, ...
6) Audio and video editing: DaVinci Resolve, Adobe Premiere, Audacity, Pinnacle Studio, Sony Vegas, ...
7) Mathematical software: Maple and Minitab.
8) Hardware and Windows installation.

3.5. Machines/tools

1) Scanning Electron Microscope, stereo-microscope, digital microscope.
2) Particle Size Analyzer (Malvern system).
3) Doctor Blade coating using an Elcometer automatic film applicator coating table.
4) Spectrophotometer (Visible and IR) and colorimeter.
5) Glove box, fume hoods, flow hoods and vacuum pumps.
6) Chemical and physical Vapor Deposition (CVD/PVD)
7) Mass spectrometry.
8) CO_2 laser systems to cut/engrave silicon wafers, glass and plastic.
9) Use of high power laser system to cut wafers.
10) Use of 3D printers (filament and resin).
11) Use of advanced soldering station to solder tiny devices under microscope.
12) Electrochemical deposition, electrochemical measurements (Cyclic Voltammetry, Chronoamperometry, Multistep Amperometry...).
13) Semi-automatic grinding and polishing system (Struers Labosystem).
14) Solar device testing.
15) Slot dye coater.
16) Spin coater.
17) Use of industrial and table ultrasonic cleaners.
18) Stylus profilometer.
19) Filmetrics system (thin film thickness measurement).
20) Automated rotary microtome.
21) Plasma surface pretreatment (hand held and chamber).
22) Cleaving of glass and silicon wafers manually with high precision.
23) Use of injector moulding machine to generate plastic samples.
24) Use of roller press calender machine to grind and mix components.
25) Balance and pH meter calibration.
26) Experience with: pH meter, viscosity meter, scales, autoclave, multi-meter, digital pipette, digital repeater pipette, Bunsen lighter, desiccators, thermocouples, centrifuge, vortex mixer, ball mill, planetary mixer, hotplate stirrer, ultrasonic mixer/homogenizer, temperature/humidity data loggers, soldering irons, ovens, incubators, climatic chambers, muffle furnace, moisture analyser, Tornado powered respirator, downflow laminar flow booth, syringe pump/driver, cables strippers/crimpers/cutters, building PCBs, tin soldering melting pot, desktop vacuum sealer machine, micrometers, …

4. ADDITIONAL

1) I have the legal clearance to live and work in the UK (EU Settlement Scheme = Settled status/indefinite leave to remain).
2) SEM and WINEDS x-ray microanalysis system certificate.
3) High pressure gas cylinder and regulator trained.
4) Inspection and Testing of Electrical Equipment certificate (PAT test).
5) Training and Certifications: Chemical Spillage Response, Fire Warden Procedures, First Aid Certification.
6) Six Sigma Green Belt certificate.
7) More than 4 years working in an organization that uses the 5S methodology. As a Lab Steward I helped implement the 5S method in the laboratory.
8) Full UK driving license.
9) Living in UK since April 2004.
10) I am passionate about photography and continuously apply my knowledge to improve whenever I work with cameras, microscopes, and images.
11) I drove from England to my house in Spain on my own a few times.

A friend working at CERN, as software developer, gave me the opportunity to collaborate, with his friends, on a movement against COVID-19, https://www.versusvirus.ch/ At that time (3-5 of April 2020) I did not have a job as my current company got rid of me because of COVID-19. I realised that I could use my time and knowledge to help these group of young talented people. I was invited to a hackathon, that means working non-stop for a few days and I accepted the challenge.

Despite not being the most productive person in the team. As I am not a professional software engineer like they are. I am very proud to say that I suggested the idea of the project. On the ***3rd of April 2020,*** *I suggested to create an app to use smartphones to collect data to track people's movement/location. This will allow to detect the undetected people spreading COVID-19. This was our video presentation https://youtu.be/h504fAfjtE4*

From https://en.wikipedia.org/wiki/NHS_COVID-19 "NHS COVID-19 is a voluntary contact tracing app for monitoring the spread of the COVID-19 pandemic in England and Wales. ***It has been available since 24 September 2020*** *for Android and iOS smartphones, and can be used by anyone aged 16 or over.[1]"*

Thanks for your time
miguel