Professions Re-Imagined

2020

2021-2022

2023-2024

2025+

More and more of city services and critical infrastructures (water, energy, waste, traffic control, bio-hazard detection, etc.) depend on sensors and the steady flow of real-time data for effective operations. As they are modernized, these cities are increasingly becoming the target of hackers. This job will require people who will serve on the front lines to ensure the security of critical infrastructure, the flow and analysis of real-time data, and to design and implement new sensor and security models for emerging services.

This job will involve generating or sourcing large training data sets which can be used in conjunction with machine learning (ML) and deep learning algorithms to train AI systems and help them perform real-time tasks. AI training managers will also be responsible for coordinating crowds of people to engage with AIs that can't be trained with ML. The training will also need to include crowds of people in separate demographics, as they will have different ontologies that need to be handled. Think Wikipedia; every page needs to be rewritten for every major demographic, for every region/language.

The design of industry leading AR/VR experiences, enabled by advances in immersive media, AI, and ambient interfaces, will require the ability to design compelling stories and interactive journeys. AR/VR experience designers will be design thinkers with experience in story development, multi-media film creation, AR application design, and gaming design. The designer will be up to date on the state of the art in AI and ambient communications techniques which are used to augment digital experiences.

Enterprise and manufacturing industries have always embraced the early adoption of automation. This trend will continue to include integrating robots to perform highly repetitive, or physically demanding jobs in warehouses and high-risk industries (like shipping or construction). Robotics' engineers will be responsible for designing, testing, and building robots that are productive and safe to operate, as well as, economical to purchase and maintain. These engineers will need to have a background in applied mechanical engineering and will use computer-aided design and drafting, and computer-aided manufacturing (CAD/CAM) systems to perform their tasks.

Products across a wide spectrum - ranging from fashion to farm produce - will be regularly showcased live on WeChat, YouTube, Amazon Live an d more. LCOs will ensure these livestreams (booming as an effective tool to sell items online) continue to operate reliably for their customers. Key to their success is ensuring that the millions of purchases or audience interactions made at once during a livestream are seamless, and that purchases do not impact the latency or quality of the video stream. The continued growth of game-centric streaming and the multi-billion-dollar esports industry will also be a focus for LCOs as they work with virtual products sold in-game, such as coveted 'skins' and upgrades in games like Fortnite, and via influencers on game-streaming mediums like Twitch.

As AI and learning algorithms become embedded in everything we touch and use, a whole new field of law around responsibility and liability is emerging. Just look at the ethical dilemmas facing autonomous vehicle designers with respect to how they optimize for safety in the face of pedestrian verses passenger tradeoffs. Another challenge will be ensuring that data sets used for training are bias-free. An AI Ethics Officer will be on the front line ensuring that their company understands how trust, fairness, and justice should be evaluated and incorporated into future services and product lines.

As the quantity and value of personal micro-data streams (behavioral and demographic) increases, individuals will look for ways to maximize their ongoing "return-on-data." The Personal Data Broker acts as a consultant and is responsible for the monetization of those assets in coordination with their client's desires for risk and revenue.

Robots and AI agents will be able to automate many of the redundant and dangerous tasks currently addressed by people in the workforce. But robots and humans will still be working alongside one another. In the factory or warehouse, the future workflows will need to be redesigned. The Person-Machine Workflow specialist will be an expert at redesigning and optimizing processes so that robots can take on the most tedious and physically demanding tasks, while factory workers will be engaged in reasoning and improvisational activities and empowered to make the most complex decisions.

Biosensors, like the canary in the coal mine, enable the rapid detection of health indicators, disease onset, and other possible dangers. Bio-sensor designers are masters in biochemistry, microbiology, & mechanical sensor design & are skilled in the design, programming, & troubleshooting of embedded electronic sensors.

While some governments and organizations (San Francisco, police body camera company Axon) have long banned facial recognition surveillance, many others have been either deploying or purchasing rights to it. As *all* kinds of cameras, trackers and sensors monitoring consumers (in both private and public) increase, so too will consumers' wariness. They will turn to PPPs who can provide personalized recommendations and tools to help them avoid these virtual eyes and achieve the level of privacy they desire. PPPs may recommend using 'digital invisibility' solutions like Noma Studio's Incognito Mask, switching to now-mainstream private browsers like DuckDuckGo, or using constantly-changing microchips in their devices.

As burnout has been officially classified as a disease and depression recognized as one of the top causes of illness, mental health is taken just as seriously as physical health. 'Mental health day' laws for students (which kicked off in places like Oregon) have been passed all over the world. At the same time, as screentime rises, there will be greater understanding about how technology exposure impacts consumers' inner states. A Screentime Specialist is a healthcare provider using biosensor inputs, disorder-detecting wearables, smartphone usage monitors that have advanced beyond Apple's, and other tools to monitor patients' tech habits in real-time and make tailored recommendations for their mental health.

Advances in machine learning (ML), neural networks, image recognition, decision support, and processing power are enabling the creation of the AI tools which function as healthcare advisers. Huge datasets and real-time data are ingested and trained using ML to diagnose and recognize various forms of diseases and the outcomes will be used by AI Adaptive Healthcare Professionals in the care of their patients. Examples range from the diagnosis of skin diseases to the diagnosis of asthma. AI healthcare advisers are a key lever in the march towards precision medicine.

The implementation and development of quantum algorithms for machine learning applications will be a major accomplishment. Quantum Computing ML Scientists explore this intersection of quantum computing, machine learning, and quantum chemistry to develop leading edge solutions in this domain. These scientists will normally hold a Ph.D in Experimental Quantum Physics or Computational Quantum Chemistry with a specialty in quantum information processing.

Firms are harnessing AI in increasingly practical ways — to invent better products and manufacturing methods. A few examples include this AI-generated, minimally-wasteful chair (from Philippe Starck) and critical solutions like flu vaccines. As the technology advances, cable and network companies will deploy AIs to build and program new systems, develop tools to predict network failure, and determine improvements to network infrastructure. An innovation director with expertise in AI will oversee their company's AI performance and ensure the system is receiving the right inputs, so it can remain unbiased and produce the best new solutions.

With cryptocurrencies becoming mainstream, every brand will have its very own form of cryptocurrency, which Brand Bankers create and ensure operate smoothly. Platforms like Flexa made cryptocurrency transactions ubiquitous by making them as sea mless as credit card transactions and available at major retailers such as Whole Foods and Walmart. Rather than adopting a mainstream global currency like Libra due to long-held privacy concerns, consumers will be encouraged to engage with brands via their own currencies to receive special rewards and value they can't find elsewhere. Hooch, for example, rewards customers who shop with partnering brands in its own blockchain-based TAP rewards dollars.

Fake news and content will not only proliferate, but also become harder and harder to distinguish from the real thing. Deepfakes must be dealt with swiftly, in order to stabilize democracies and protect the reputations of companies, governments and individuals. Amidst the technological arms race between constantly improving deepfake creators and deepfake eliminators, both operators and government agencies will employ DDOs. These digital forensics, security, machine learning, biometrics and AI experts will be responsible for detecting and eliminating deepfakes among systems (either a country's or a company's) as soon as they are uploaded or broadcast across a network. The DDO must stay up-to-date on the latest AI-powered detection systems, as well as any policies and media forensics tools released by authorities such as DARPA.

People will increasingly opt to meet with others and travel in virtual realms, due to the relative inconvenience and environmental impact of traveling by plane, car, flying car, etc. And as countries like France ramp up 'eco-tax', individuals and corporations will also turn to VR Travel Agents to save money. This professional will develop VR environments suited exactly to customers' needs and ensure the virtual locations (or users' avatars) do not malfunction while visitors are immersed inside them. VR agents will often be hired to help international companies hold meetings with their various offices around the world or help employees 'digitally commute' to work which will be a mainstream occurrence. The agent may be an expert in or representative for platforms such as MeetinVR or, for social meetups, coffee shop environments like Molotov's. Additionally, VR Travel Agents may be hired to arrange 'trips' to various events around the world, like esports tournaments, and engage with live broadcasts via VR. The agent must additionally hold expertise in 5G networks, VR audio and avatar design.

Consumers' expectations for quick shipping are going to ramp up, as companies seek to outdo each and deliver to customers within minutes. That's why retailers, delivery platforms and postal carriers will seek to deliver via the fastest and most reliable delivery drones. Companies will appoint a network expert, operations specialist and drone pilot to be their DDS Director. This official will handle delivery logistics and either run the drone fleets belonging to their employer, or coordinate drones from major carriers like Prime Air or UPS. On the food-delivery front, directors employed by major chain restaurants will work with platforms including Uber Eats. DDS Directors are responsible for ensuring the drones are visible to Metropolitan Air and Road Traffic controllers, staying updated on FAA policies, coordinating with human delivery staff or autonomous vehicles on the ground (when necessary), and making sure customers are able to track and receive their orders.

As drone-based services and autonomous vehicles become more prevalent, systems will be introduced which enable "human assisted electronic traffic management" focused on safety and optimization of our airways and roadways. The Metropolitan Air and Road Traffic Controller will be required to interpret manned and unmanned vehicle data streams, as well as, environmental, metropolitan, and emergency factors in real-time. Using adaptive AI modeling and analytics they will be on the front lines in redirecting vehicles and altering flight plans as required.

Neuro Robotic Engineers are focused on combining the domains of neuroscience and robotics in the creation of “wearable robots” which help augment people’s physical and cognitive abilities. Neuro Robotic Engineers typically work on the creation of brain-computer interfaces, assistive exoskeletons, and things like smart lenses.

Companies (SpaceX, Telesat, Amazon, to name just a few) were in the process of developing broadband constellations in 2019. Now, they'll be fully up and running! The CCM will need to make sure they continue to provide a reliable, high-speed, low-orbit, low-latency broadband internet connection to underserved populations. And amidst this new ‘space race’, they must also work to make their firm's constellation more prevalent in selected regions than the competitions'. The CCM will work on obtaining and maintaining approvals from the FCC (as well as other communications and spectrum authorities) and be responsible for coordinating thousands of satellites’ movements simultaneously.