



immerse
EDUCATION

Software Development & AI

SYLLABUS OVERVIEW

15-18 YEARS OLD

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About the Programme

Immerse Education is an award-winning academic summer school provider offering programmes for 15-18-year-olds in Toronto, San Francisco, New York, London, Cambridge, Oxford and Sydney.

These introductory programmes aim to provide participants with academically challenging content in a classroom environment based on the university style of learning. With Career Insights, participants gain the advantage that comes with learning from industry professionals as well as university tutors, through an educational model founded on project-based learning. Through 40 hours of interactive academic sessions combined with practical workshops and industry visits, the Career Insights programme offers students unique and valuable insight into what it would be like to study their chosen subject at an advanced level and apply their knowledge and skills in the real world.

Explore Future Careers

Do you have your sights set on a particular career path? The Career Insights summer programme will introduce you to a world of opportunities in the field, using project-based learning and practical study to enhance your skills and knowledge.

On this unique programme, you will explore real- world issues relating to the context of your chosen subject, working alongside other academically talented participants to innovate and pitch groundbreaking ideas. Interactive workshops and networking events offer you the opportunity to learn from professionals in the business. The Career Insights educational model is designed to support you in finding the career path best suited to your long-term goals and ambitions. Immerse Education has worked with expert guidance counsellors, seasoned educators and experienced career advisors to design the ultimate career preparation course.

Unique Academic Enrichment Programmes





Project Based Sessions

Career Insights lessons are built on the foundation of hands-on learning. We want you not just to retain knowledge, but also to apply your newfound understanding to real-world, practical examples as you develop throughout the programme. Our Project Based sessions are designed for you to have ample opportunity to apply what you are learning to practical tasks, allowing you to further identify gaps in your knowledge and skillset while solidifying your growth and understanding.

Industry Visits

One of the most exciting parts of the Career Insights programme is the unique opportunity for participants to attend inspiring industry visits whereby they can interact and learn from industry professionals in their field of study. Industry visits take learning out of the classroom and into the real world, where students can observe and explore how the skills and knowledge built throughout the programme apply to a career in their subject. This unique aspect of our programme ensures students also gain the chance to network directly with industry professionals who may share with you opportunities you hadn't otherwise envisioned.

Why Get Career Ready?

Every young person needs high-quality career guidance to make informed decisions about their future. Relevant and informative career guidance is necessary for social mobility. Despite the need for quality careers guidance for young people, it is one of the most lacking areas in schools around the world. In 2013, Gatsby introduced the Gatsby Benchmarks which offer useful insight into effective academic models that prepare students for future careers. Immerse Education's Career Insights programme is dedicated to delivering programmes that meet the eight important pillars that make up the Gatsby Benchmarks as outlined below.



A stable careers programme



Encounters with employers and employees



Learning from career and labour market information



Experiences of workplaces



Addressing the needs of each student



Encounters with further and higher education



Linking curriculum learning to careers



Personal guidance



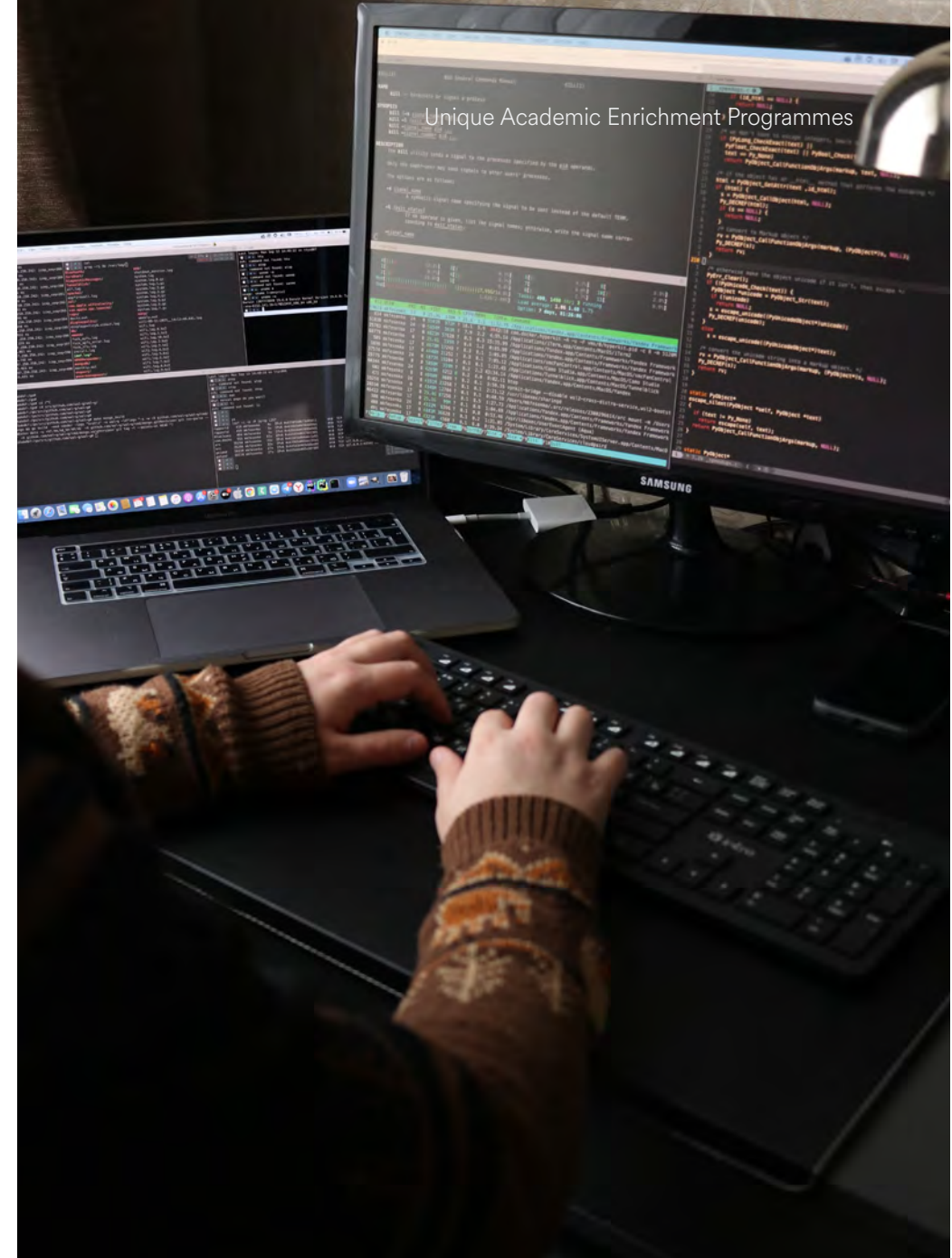
Aim of the Software Development & AI Programme

The Immerse Education Software Development & AI programme dives into technology, coding languages, algorithmic thinking, and the profound potential of artificial intelligence. The overarching aim of this programme is to equip participants with the knowledge and skills to explore these realms in a future career. Participants will actively engage with tech giants, delve into coding bootcamps, and immerse themselves in the dynamic world of software innovation. By seamlessly blending theoretical foundations with hands-on coding experiences, participants will develop the aptitude to engage with technology advancements that shape industries and transform societies. Through experiential learning and meaningful interactions, participants will be well-prepared to make meaningful contributions within the rapidly evolving field of software development and AI, propelling technological advancements and shaping the future of innovation.

Introduction to Coding Practices & AI Fundamentals

Embark on an introductory module that delves into the essential components of coding practices and the transformative potential of artificial intelligence. You'll explore coding languages, algorithmic thinking, and the basics of AI applications, forming the foundational understanding necessary to engage in undergraduate-level theories in software development and AI.

Unique Academic Enrichment Programmes



Google Headquarters

A visit to the Google headquarters in Silicon Valley offers students a deep dive into the world of software development and artificial intelligence. Exploring Google's innovation labs, AI research centers, and collaborative workspaces, participants can understand how cutting-edge technology shapes our digital landscape. Interactions with software engineers and AI experts provide valuable insights into coding, algorithm development, and the future of AI-driven technologies.



Practical Experiences

Participating in practical experiences centred around software development and AI in San Francisco unlocks the world of cutting-edge technology. Site visits to tech giants, coding bootcamps, and AI research centres offer insights into coding languages, algorithm development, and machine learning applications within diverse contexts. You'll have the chance to explore advancements in AI, data science, and software innovation.



Real World Project

Embark on a coding adventure by designing and building a software application that leverages the power of AI to solve a real-world challenge. From conceptualization and algorithm design to coding implementation and rigorous testing, you'll bring your software development and AI integration skills to life.



Professional Development

Bridging academia, technological innovation, and labour market information, this module uncovers the array of roles within software development and AI. Featuring guest lectures, expert discussions, and workshops on coding and AI integration, you'll acquire vital proficiencies. Individualized coaching sessions provide tailored advice and a career path, ensuring lasting advantages beyond your participation in the Software Development & AI Insights programme.

Coding Fundamentals and Programming Paradigms

Embark on a comprehensive journey through coding fundamentals and programming paradigms in this foundational session. Participants will uncover the intricacies of programming languages, syntax, and core concepts essential for software development. Dive deep into the principles of object-oriented and functional programming, gaining a comprehensive understanding of modular design's significance in creating efficient and robust software solutions.





Coding Workshop with Developers

Silicon Valley Developers will host our coding and AI workshop. Participants can engage in coding exercises, explore machine learning concepts, and gain insights into AI applications. This workshop offers exposure to cutting-edge technologies under the guidance of tech experts.



Artificial Intelligence: Concepts and Applications

Delve into the multifaceted world of artificial intelligence and its diverse applications in this illuminating session. Explore the fundamentals of machine learning, neural networks, and deep learning algorithms. Gain insights into real-world AI applications, from natural language processing to image recognition. Engage in discussions about AI's ethical considerations and its potential impact on industries and society. Through thought-provoking examples, participants will cultivate a nuanced understanding of the transformative power of AI.

Data-driven Decision-making with Machine Learning

Navigate the landscape of data-driven decision-making using machine learning techniques in this insightful session. Participants will explore supervised and unsupervised learning, classification, regression, and clustering algorithms. Dive into the process of feature engineering, model selection, and evaluation. Through hands-on exercises, attendees will gain practical experience in utilizing machine learning to extract valuable insights from data. By the end of the session, participants will possess the foundational skills to harness data's potential for informed decision-making.



Ethics and Responsible Development

Engage in thought-provoking discussions about the ethical considerations and responsible development of AI technologies and applications. Explore topics such as bias in AI algorithms, algorithmic transparency, accessibility in code, and the broader societal implications of AI-driven decisions. Delve into strategies for mitigating bias and ensuring that AI systems and applications promote fairness and inclusivity. By the end of the session, participants will be equipped to navigate the intricate ethical landscape surrounding software development.



AI in Industry: Transforming Businesses

Embark on an exploration of AI's transformative impact on industries and businesses in this forward-looking session. Participants will investigate how AI technologies are enhancing customer experiences, optimizing supply chains, and driving innovation. Engage in discussions about the challenges and opportunities of integrating AI into various business processes. Through real-world case studies, participants will gain insights into how AI is reshaping industries and revolutionizing the way companies operate.





The Career Insights programme has been really (for lack of a better word) immersive. I think Immerse has given me a lot of clarity in terms of having a better understanding of what a career, or even university education, in medicine looks like.

Mia

Immerse Career Insights Alumni



OUR AWARDS AND ACCREDITATIONS



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Inspiring Great Young Minds