資工矽友職涯經驗分享論壇

六位矽友不藏私分享在矽谷從應徵、轉職到升遷的經歷以及面對 AI 浪潮的心態與技能！

文／杜懿洵

　　今年的資訊矽友交流會於 8 月 24 日在工研院矽谷辦公室舉辦，除了資訊學院陳志成院長、曾建超副院長、黃俊龍系主任、黃俊穎所長及系友會會長大河馬，一同前往灣區與大家交流並分享系上現況之外，計科系 80 歲系主任 - 杜敏文老師也特別蒞臨參與，而當天更邀請到了六位在矽谷的校友，與大家分享職涯經驗與對 AI 趨勢的看法。一個多小時的交流會，就在熱烈的分享與歡笑聲中圓滿落幕。

　　此次交流會由在 Google 任職軟體工程師的 Victor 與 Irene 擔任主持人，邀請的六位矽友除了軟體工程師之外，也包含硬體、PM、管理職與面試官等工作背景，六位矽友的資料如下：

1. **Meta 擔任 Engineering Manager 的劉峻瑋**
2. **Juniper Networks 擔任 Senior Director of Software Engineering 的賈德勤**
3. **Covariant AI 擔任 Head of Software 的林起武**
4. **Salesforce 擔任 Senior Software Engineer 的游雅軒**
5. **Google 擔任 PM 的林永彧**
6. **Rivos 擔任 Lead of CPU Design Verification Team 的鍾懿軒**

Q1：分享找工作的看法和經驗。

鍾懿軒： 在 Apple 工作十二年後轉入 start up 的懿軒表示，自己是做硬體的，但就她的觀察，資工系是很有發展潛力的；除了 performance analysis、detect 硬體、做 verification 之外，還可以 bring up 一整個 CPU、GPU，再加上美國管制人才是嚴格的，像中國人就不能做設計這塊，所以如果大家有工作是可以學習到設計這塊，在找工作上會很有機會。但懿軒也提醒，因為設計主要是在解題，是要從已知達到未知，因此面試的時候會看重求職者的 critical thinking，會給一個求職者不會的題目，看求職者解題的過程。此外，懿軒也強調，資工系的 computer architect 很重要，大家在學校的時候一定要好好學習。

劉峻瑋： 在 Meta 擔任面試官的 Tony 表示，履歷要能突顯自己的話，工作經歷和工作符合度是重要的，像他們招募就會優先找 NVIDIA 或是 A&D 的人，因此鼓勵大家畢業的時候，可以試著找大公司的 intern，這樣會讓履歷更為吸睛；此外，META 現在正在招募 AI 與 GPU 相關的人，如果是這個領域的人，現在求職是很好的機會。

Q2：AI 對現在矽谷的科技人有什麼影響？轉型成下一世代的 PM、軟體工程師需要什麼技能？

林永彧： 從 PM 的角度與大家分享，自己兩年前已經在 machine learning AI team，但即使已經站在比較第一線的位置，仍不能看出 Open AI 後來爆發的趨勢，所以建議大家對於 AI 的議題可以回到本質上去思考。而從 PM 的角度來看，雖然 AI 帶來很多正面的轉換點，但最重要的是 business 的 ROI 評估為何？從這個角度去衡量 AI，就比較不會隨波逐流。

林起武： 從 engineer 的角度與大家分享，矽谷是走在尖端的，大環境不斷在變，也經歷了產業從半導體變成 PC、網路，再到現在 AI 的時代。因此面對 AI 趨勢，第一個是要想如何去 implement application，像是有 open source 之後，寫程式的方式與寫的重點就完全不一樣；第二個是要思考怎麼變得更 productive，像現在有很多 internet information 教大家怎麼寫 code。總結而言，在一直變化的環境中，engineer 一定要先能夠適應、才能生存、然後才能成功。至於 AI 的影響，除了對工作的工具與方法產生影響之外，另一個就是已經吸走大部分的資金，而這也導致 META、Google 的裁員，但另一方面，這些公司又在 hire AI 的人，所以大家除了要看到環境變化之外，也要了解如何去調整自己、不斷學習。

賈德勤： 從管理者的角度來看，除了把 AI 當作是一個 tool、要能夠駕馭它之外，最重要是「發現問題」，要從不同角度，像是消費者端、產品端等去看問題，而不是等別人告訴你要解什麼問題。

劉峻瑋： 現在的 AI 與以前在學校學的已經不一樣，所以即使是主管職，也是每天要不斷學習新東西、看 paper、參加研討會、跟大家討論、找網路資源、更新在業界的資訊等等。因為很難預測下一個 open AI、NVIDIA，就連產業界也都還在思考 AI 要怎麼做，所以建議大家不要跟風，要相信自己，照自己的興趣去做；市場很大，只要認真做，把自己東西做精，錢和機會就等著你。

鍾懿軒： 從硬體角度來看，還是要跟大家強調，computer architect 很重要！因為在硬件設計上的 design methodology 是可以互相應用的，而 computer architect 是 CPU design，是業界最複雜的設計。因此建議大家在學校要選 CPU 的課，學習最複雜的解題方法、練習最複雜的 design trade off thinking，這樣之後什麼樣的 design 都可以 apply。

QA3：AI 趨勢之下，除了自我學習心態、持續精進之外，在工作多年之後，要怎麼思考 promotion？

游雅軒： 給剛畢業的學生建議：很多人覺得 promotion 是老闆會幫忙，但其實是要自己去嘗試，要思考自己喜歡做什麼，然後去找機會展示，讓自己被看見。

林起武： promotion 需要能力與機會；能力要靠自己培養與鍛鍊，機會有時候看老闆，有時候自己去找。除了要讓老闆了解你，知道什麼樣的機會對你很重要、願意幫助你之外，自己也要想辦法找；通常比較 junior 的位置，能力比機會重要，但比較 senior 的時候，就需要花時間去找不同的機會，甚至創造自己的機會，才有辦法成功。

賈德勤： 大家可以想一想一個公司能有幾個 VP？幾個 senior director？所以機會是有限的。如果大公司沒有缺，可以試著從 start up 做起。而除了能力很重要之外，也要學會說，像印度人就很會說，三分可以包裝到十分。此外，也可以思考藉由跳槽去創造更多機會。

鍾懿軒： 提供大家一個今天就可以開始做的：閱讀《The Pragmatic Programmer》並開始練習裡面七十幾條 good habits，這樣會讓你在工作上與做同樣事情的同事有差異化。另外一個非常好開始的機會是：好好思考自己的目標，並利用跟主管一對一談話的時間去討論你的成長路徑。

劉峻瑋： 提供大家兩個 tip，第一個就是跟主管聊天時，直接開門見山說你要升職，並討論該怎麼做。明確的把目標講出來、訊息送出去，不然有可能就會變成其他人都很積極在談，主管可能沒有時間，或是就忘記你了，這樣你的 promotion 就會不在主管的考慮範圍內。第二個 tip 就是可以試試看去了解自己職位的上面幾層

可以叫得出自己的名字。這是一個很好的指標，可以測試你在組織的位置，也可以了解你自己的談資。

林永彧： 針對 junior，我的建議跟大家一樣，就是要很明確的跟主管溝通，在你人生的這個階段，你想要做什麼事情？這裡是可以接受你要 level up 或是因為家庭或個人因素，不想再往上。至於中階或稍微資深一點的，我的建議就是隨時做好準備，因為機會有可能隨時找上門來。像我就是每半年會整理自己的履歷，每一年隨機去面試兩、三家公司，讓自己記得面試的感覺。有一定年紀的工作者，隨時做好準備是非常重要的事情！

Q4：分享職場必備技能。

林永彧： 要花多一點心思在跟同事、主管的 small talk，所以要多收集資訊、多訓練足夠的話題、以及一些社交的英文用法。

游雅軒： 現在蠻多遠端工作的，所以訓練溝通的能力變得特別重要。

劉峻瑋： 建議大家「多運動」，因為除了會有一個健康的身體之外，也可以成為跟同事 small talk 時候的談資，一舉數得。

鍾懿軒： 跟大家分享要 reaching out，不要畫地自限、被組織限制，當有不懂或沒做過的事情，可以去找這個領域最厲害的人問，跟最棒的老師學。Reaching out 會帶給你很多益處，讓更多人認識你，你也能擁有跨域的人際關係，這是非常重要的。

賈德勤： 我分享比較適用在老牌一點的傳統大公司，就是大家可以去搞懂公司的 process，這樣就可以弄到很多 benefit，我之前就是這樣成為整個 BU 最有錢的工程師。但這個方法不適合 start up，因為它們沒有 process。另外就是建議大家去搞懂 framework，像是 google 的 OKR，尤其是當從小公司要 scale up 變成大公司的時候，framework 是很有用的，可以幫助你在組織裡去探索你的目標是什麼，你可以貢獻什麼。

林起武： 第一點要支持懿軒的建議，就是要好好學習 computer architect，這個對於做 RD 有很大的幫助。第二個就是建議大家去找一個 mentor，因為會有一些事情不大敢跟老闆說，跟同事說好像也不是很合適，但是又需要有人幫助、互相腦力激盪，這種狀況最好的方法就是找 mentor，也可以互相交換經驗，在困難的時候獲得幫助。一些大公司有 program 幫你找，如果沒有，就需要自己去找，可以透過運動或 small talk 的時候去找。

QA5：請大家分享一個自己的 tip，是如何去 incentive 或 motivate 自己去做到覺得害怕的事情。

林起武： 我的方式是設立一個目標，譬如說公司有 party，就設定要跟幾個從來沒有見過面的人說話，用強迫的方式讓自己去溝通、擴展。

賈德勤： 如果是做軟體的，可以主動去 own bug，這樣就有機會跟其他人互動，也容易被大老闆記住。

鍾懿軒： 一開始我也不太敢講話，我的解法是想辦法每天都跟講英文的同事午餐，這樣就必須要社交，最後不但英文練習得很好，也有了 mentor 和朋友，所以就是要勇敢幫自己創造機會。

劉峻瑋： 因為我不是很 social 的人，所以也沒有很刻意的去增加 social 的機會，但我覺得可以想想自己喜歡的事情，然後找到一個願意談的人一起聊，譬如像是兩個人都喜歡健身，或是慢跑，這樣自然就可以找到互動的人。另外，我就是接受我自己不是一個很會 small talk 的人，但是當我有機會跟別人相處時，我就會關注對方，把握住機會真心和別人聊天、了解別人。

林永彧： 我覺得大家會對於 social 或 small talk 有 concern 的話，很多時後是因為對英文的自信心不夠。我因為來美國的時候是先唸了兩年書，所以我雖然本身比較內向，但在學校就是善用資源，去找英文 coach 聊天，慢慢等到一個程度之後，壓力就不會那麼大了。另外一個就是「興趣很重要」，不要覺得自己的興趣太冷門或太小，因為那永遠是一個說話的起始點，藉由興趣去接觸，就可以增加很多機會。像我自己對車子很有興趣，就會開始找 local event 去看，去了之後發現不到 10% 的人是亞洲人，各種背景的人都有，但因為是自己有興趣的東西，被強迫亂聊也會學到東西，也不會覺得是很刻意的，或是要裝得很厲害。

游雅軒： 我自己的經驗是跟找做同一個 project 的同事聊，可以是工作或是分享私人的事情，這樣也會拉近距離，讓工作的氛圍更好。然後也可以找一個 career coach，會有蠻多幫助的。

Silicon Valley CS Alumni Career Insights Forum
Six Silicon Valley Alumni Share Candid Insights: Navigating Job Applications, Career Transitions, Promotions, and Embracing the AI Revolution with the Right Mindset and Skills

The Computer Science Alumni Networking Event took place on August 24, 2024, at the Industrial Technology Research Institute's Silicon Valley office. Attending were several distinguished guests, including Dr. Jyh-Cheng Chen, Dean of the College of Computer Science; Dr. Chien-Chao Tseng, Associate Dean; Dr. Jiun-Long Huang, Department Chair; Dr. Chun-Ying Huang, Director; and Nathan Chiu, President of the Alumni Association. They traveled to the Bay Area to connect with alumni and share updates about the department. We were also honored by the presence of Dr. Min-Wen Du, the 80-year-old former Chair of the Department of Computer Science. The event featured six alumni from Silicon Valley who shared valuable insights into their career journeys and perspectives on AI trends. The event concluded on a high note, filled with lively discussions and laughter.

This event was hosted by Victor and Irene, both software engineers at Google. The six invited alumni included software engineers and individuals with backgrounds in hardware, project management, executive roles, and interviewers. Below are the details of the six alumni:

1. **Meta: Tony Liu, Engineering Manager**
2. **Juniper Networks: David Jea, Senior Director of Software Engineering**
3. **Covariant AI: Victor Lin, Head of Software**
4. **Salesforce: Hsuan-Ya Yu, Senior Software Engineer**
5. **Google: Nicolas Lin, Product Manager**
6. **Rivos: I-Shuan Tsung, Lead of CPU Design Verification Team**

Q1: Insights and Experiences on the Job Search Process.

I-Shuan Tsung: After spending twelve years at Apple and later transitioning to a startup, I-Shuan with her hardware background shared her insights on the potential for growth in the Department of Computer Science. She pointed out that, in addition to performance analysis, hardware detection, and verification, individuals can play a significant role in developing entire CPUs or GPUs. However, she noted that due to strict U.S. regulations on talent, obtaining design positions can be a challenge for individuals from countries such as China. Therefore,

acquiring design-related skills can greatly enhance one's career prospects. I-Shuan emphasized that design is fundamentally about problem-solving, which involves navigating from the known to the unknown. During interviews, employers often focus on candidates' critical thinking abilities by presenting unfamiliar problems to evaluate their approach to finding solutions. Additionally, she stressed the importance of mastering computer architecture, encouraging students to pay special attention to this area.

Tony Liu: Tony, an interviewer at Meta, emphasized the importance of aligning your work experience with the job you're applying for to make your resume stand out. He noted that Meta usually prioritizes candidates with experience from companies like NVIDIA or A&D. Tony advised graduates to seek internships at large companies, as these experiences can significantly enhance their resumes. Additionally, he mentioned that META is actively seeking talent with expertise in AI and GPU. For professionals in this industry, it is a great opportunity to explore new career options.

Q2: How is AI shaping the careers of tech professionals in Silicon Valley today? What skills are essential for transitioning into the next generation of project managers and software engineers?

Nicolas Lin: From a project manager's perspective, I have been part of the machine learning AI team for the past two years, but even in a front-line position, I couldn't predict the rapid rise of OpenAI. Therefore, I advise everyone to step back and approach AI from a fundamental standpoint. While AI has certainly led to many positive changes, assessing its business return on investment (ROI) is the most important factor. With this in mind, you'll be less likely to follow trends blindly.

Victor Lin: From an engineer's perspective, Silicon Valley is always at the forefront of technology, and the landscape is constantly evolving. We've seen industries transition from semiconductors to personal computers, then to the internet, and now into the AI era. When faced with the AI trend, our main priority should be determining how to implement applications. For example, the rise of open-source software has significantly changed the way people code and the focus of coding. Another key consideration is enhancing productivity. Today, numerous online resources are available to help people write code more effectively. In the rapidly changing landscape,

engineers must learn to adapt for survival, and only then can they succeed. The influence of AI has revolutionized available tools and techniques while reallocating substantial funding. This shift has unfortunately led to significant layoffs at major companies like Meta and Google. Nevertheless, these same companies are still actively hiring talent for AI-related roles. It is essential to recognize ongoing environmental changes to adjust accordingly and commit to continuous learning.

David Jea: From a manager's perspective, it's essential not only to view AI as a tool and learn to leverage its potential; but more importantly, to focus on 'identifying problems.' One should approach challenges from multiple perspectives—such as those of the consumer, product, and others—rather than waiting for others to define the problems.

Tony Liu: The AI we encounter today vastly differs from what we learned in college. As a result, even as a manager, it's important to continue learning every day. This can be achieved by reading research papers, attending seminars, participating in discussions, exploring online resources, and staying informed about the latest industry trends. Predicting the next breakthrough, such as OpenAI or NVIDIA, is challenging. Even industry professionals are still figuring out how to navigate the evolving AI landscape. I recommend you stop blindly following trends. Instead, trust your instincts and pursue your passions. The market is extensive, and by honing your expertise, opportunities and success will follow.

I-Shuan Tsung: From a hardware perspective, I want to emphasize the importance of computer architecture, as the design methodologies used in hardware development are highly transferable. Additionally, CPU design within computer architecture is one of the most complex challenges in the industry. Therefore, I strongly recommend taking CPU-focused courses in college to master advanced problem-solving techniques and enhance your ability to navigate complex design trade-offs. This solid foundation will empower you to apply your skills to any design challenge in the future.

QA3: In the age of AI, in addition to fostering a mindset of self-learning and continuous improvement, how should one approach the idea of promotion after many years in the workforce?

Hsuan-Ya Yu: Advice for new graduates: Many people think that promotions are solely determined by their boss, but the reality is that you need to take the initiative. Reflect on what you are passionate about, actively seek opportunities to showcase your skills, and ensure that you remain visible to others.

Victor Lin: Promotion requires both skill and opportunity. While developing and refining your abilities is essential, opportunities may depend on your boss or need to be

actively pursued by you. It is essential for your boss to understand your strengths, recognize the opportunities that are important to you, and be willing to support your growth. Furthermore, taking the initiative to seek out opportunities independently is crucial. In junior positions, skills are often valued more than opportunities. However, as you progress to more senior roles, it is essential to invest time in seeking diverse opportunities or even creating your own path to success.

David Jea: Consider the number of Vice Presidents (VPs) or senior directors a company can have; opportunities at these levels are often limited. If a large company lacks such openings, starting at a startup can be a good alternative. Besides skills and competence, being able to present yourself effectively is crucial. For example, people from India are particularly skilled at showcasing their strengths, often turning something that's only partially developed into something that appears fully polished. Moreover, switching jobs strategically can open up new opportunities and help you advance your career.

I-Shuan Tsung: Here's something you can start today: read The Pragmatic Programmer and begin practicing its 70+ good habits. This will help differentiate you from colleagues who are doing the same work. Another great opportunity to begin with is to take some time to reflect on your personal goals and use your one-on-one time with your manager to discuss your growth path.

Tony Liu: I'd like to share two valuable tips. First, when speaking with your manager, be upfront about your desire for a promotion. Clearly outline your goals and discuss the specific actions required to achieve them. Being transparent about your ambitions is essential; otherwise, while others may actively pursue their goals, your manager might overlook yours or not have the time to consider them. If that happens, your promotion could easily fall off their radar. The second tip is to assess whether higher-position managers can recognize you by name. This is an important indicator of your standing within the organization and helps you gauge your visibility and influence.

Nicolas Lin: For junior employees, my advice remains the same as everyone else: be clear and upfront with your manager about your goals at this stage in your career. Make sure to communicate whether you're aiming for advancement or, due to personal or family reasons, you're content with staying at your current level for now. For mid-level or more experienced professionals, it's essential to be always prepared, as opportunities can arise unexpectedly. I refresh my resume every six months and make it a point to interview with two or three companies annually. This helps me stay sharp and familiar with the interview process. For those with more experience, being constantly prepared is key to seizing opportunities as they arise!

QA4: Key workplace skills are fundamental to achieving success in any career.

Nicolas Lin: I recommend spending more time engaging in small talk with colleagues and managers. This can be achieved by gathering more information, practicing a variety of conversation topics, and mastering common social phrases in English.

Hsuan-Ya Yu: As remote work is becoming more common, developing effective communication skills has become increasingly important.

Tony Liu: I encourage everyone to "exercise more," as it promotes a healthy body and offers excellent conversation starters for small talk with colleagues—benefiting you in multiple ways.

I-Shuan Tsung: I want to emphasize the importance of "reaching out" and avoiding self-imposed limitations or restrictions set by your organization. When encountering something new or unfamiliar, don't hesitate to connect with experts in that field and learn from the best. Reaching out offers numerous advantages—it helps you expand your network, gain recognition, and build cross-disciplinary relationships, which are highly valuable for personal and professional growth.

David Jea: I want to offer some advice that is particularly useful in established, traditional companies: take the time to understand the company's processes. Mastering these processes can lead to significant advantages—this is how I became the highest-paying engineer in our business unit. However, this approach doesn't apply to startups, as they often lack structured processes. In addition, I recommend getting familiar with frameworks like Google's OKRs. This is especially valuable when transitioning from a smaller company to a larger one. Such frameworks can help you define your goals and understand where you can make the most meaningful contributions within the organization.

Victor Lin: First, I fully agree with I-Shuan's advice to focus on mastering computer architecture, as it is a critical skill for anyone in R&D. Secondly, I highly recommend seeking out a mentor. There will inevitably be times when you feel uncomfortable discussing certain matters with your boss, or when it's not quite appropriate to approach your colleagues. In these situations, a mentor can be invaluable. They can offer guidance, help you brainstorm solutions, and give support when challenges arise. Many large companies offer mentorship programs to help you connect with a mentor, but if that's not available, you can take the initiative to find one yourself. Participating in activities like sports or engaging in casual conversations can be excellent ways to build relationships with potential mentors.

QA5: Could everyone share a personal tip on how you motivate yourselves to take on tasks you find intimidating?

Victor Lin: My approach is to set specific goals. For instance, at a company party, I'll challenge myself to talk to a set number of people I've never met before. This helps push me out of my comfort zone and encourages me to communicate more, ultimately expanding my network.

David Jea: If you're in software development, consider taking the initiative to own bugs. This approach allows collaboration and boosts visibility among senior leadership, increasing recognition opportunities.

I-Shuan Tsung: At first, I was hesitant to speak up. To overcome this, I made a point to have lunch with English-speaking colleagues every day. This forced me to engage socially, and as a result, my English improved significantly, and I gained both a mentor and new friends. The key is to be bold and actively create opportunities for yourself.

Tony Liu: I'm not a very sociable person, so I don't actively seek out social situations. However, I've found it helpful to focus on activities I enjoy and look for others who share those interests. For example, if both people enjoy fitness or jogging, it creates a natural way to connect. I've also accepted that small talk isn't my strength, but when I do have the chance to interact with someone, I make a conscious effort to engage with them sincerely and take the opportunity to build a genuine connection.

Nicolas Lin: Many people feel anxious about socializing or engaging in small talk because they lack confidence in their English skills. When I first came to the U.S., I studied for two years. Despite being naturally introverted, I took advantage of available resources by working with an English coach to practice speaking. Over time, as my skills improved, the pressure began to decrease. Another key point is that 'interests are important.' Don't worry if your hobbies seem niche or insignificant—these can serve as great conversation starters. Shared interests can open up many opportunities. For instance, I have a passion for cars, so I began attending local events. At these events, less than 10% of the attendees are Asian, and the crowd is incredibly diverse. Because I am genuinely interested in the topic, I can engage in conversations naturally, learn new things, and never feel the need to force anything or pretend to be an expert.

Hsuan-Ya Yu: Based on my experience, engaging in conversations with colleagues working on the same project helps strengthen my professional connections. Discussing work-related topics or sharing personal stories fosters a more positive and collaborative work environment. Furthermore, working with a career coach can be extremely beneficial, providing valuable insights and guidance for your professional growth.