

## Shivam Patel - SkyDemon Scholarship 2024

For a long time, I have been on track towards a career in aviation. I joined my school's Combined Cadet Force at age thirteen and enjoyed multiple air experience flights (AEF) from RAF Wittering. After each flight, I left wanting more time up



in the air! AEF pilots come from all over the armed forces, all of which I met encouraged me towards becoming a pilot. In November 2019 I was awarded an Air Cadet Pilot Scholarship, covering 12 hours of flying in an Aquila A211 at Tayside Aviation, Dundee Airport. This culminated in my first solo flight of one circuit around Dundee. I was 16 at the time and this most definitely was my greatest achievement at the time. From this scholarship I had a valid Class 2 medical (which is a requirement to start this scholarship), so was all set to start training.

Over the past three years, I have been on a degree apprenticeship studying aerospace engineering in Bristol. The scheme has enabled me to earn while learning. This means I am no stranger to balancing study and work, which was to my advantage whilst undertaking flying training. Back in my first year of university, I joined Bristol University Air Squadron (UAS) in January 2022. The squadron had to leave the RAF Colerne due



to airfield closure in 2018. In early 2023, the squadron moved to MOD Boscombe Down (collocated with Southampton UAS). I have been lucky to continue flying on the Grob Tutor (115E). Also in 2023, a QFI moved from Cambridge UAS to Bristol UAS taking up the mantle of Chief Flying Instructor (CFI) and prompted me to apply to the Air Pilots scholarship. I will take this opportunity to thank the Squadron for their support when applying to the scholarship.

Before the interview I sought out flying schools at both Bristol and Gloucestershire Airports. To my surprise, schools either did not believe such a scholarship existed or did not have space for an intensive course! I spoke with the Air Pilots office about my concerns and Angie introduced me to Cotswold Aero Club. Jan, an instructor and club's administrator, invited me to see around the club and draft a training schedule. This was my first application to this PPL scholarship and received a phone call from the Air Pilots the day after my interview congratulating me. I knew it was reality when I read "congratulations" in the confirmation email. Little did I know this was the beginning of a fantastic summer to never forget.



The first sortie was June 4<sup>th</sup>, which covered an introduction back to the basic effects of controls and general handling while flying. On this flight, I really took the sights in and tried to capture the picture from the air of the Gloucestershire landscape.

Staverton is currently operational from 0900 until 1900 on weekday and 1800 on weekends, I was able to fit most flights in evenings (after working) or on weekends. As I studied more into the theoretical syllabus the importance of human factors and principally fatigue or stress became clear. Throughout training, I was conscious of my performance and stressors. There is no doubt that it was challenging to fit an entire PPL around a full-time apprenticeship. Lost time (to weather, maintenance, so on) and fatigue were the biggest risk factors to my training.

My degree study and training on the UAS significantly eased the amount of time I needed on theory and self-study. I dedicated most of my free time this summer towards this goal and had great fun doing so. Part of the scholarship was access to Pooley's Aviation Academy; this was an interactive study portal with masses of practice questions. The PAA website was a fantastic way to revise and try a representative style of questions that feature in the CAA e-Exams.

I made numerous bookings, essentially every other day, to progress at pace through the flying syllabus. I worked on the first sorties, familiarising myself with the Robin DR400.



I completed all training on the Robin DR400, across two variants G-BKDJ (/120) & G-HANS (/108). This aircraft was different to the Tutor with a fixed pitch prop and hand brake (instead of toe brakes).

Quickly, I was ready for my first solo flight since 2020, completing three circuits around the airfield. I was thrilled to get back to that stage in my flying training. Soon after my first solo I went on a recce to see the makeshift city of Glastonbury from the sky, of course adhering to the temporary flight restrictions. Phase three of training brought in emergency procedures, visual navigation, and radio navigation into the picture. I was fortunate to fly around the Brecon Beacons, Somerset coastline, and above Bristol.

Soon it was time for my first solo navigation flight, often referred to as the "solo sector recce." I completed one to the north of the airfield and another to the west of the airfield. The following weekend, I attempted a larger triangle starting at Gloucester, to Ludlow, routing to Stourport-on-Severn, and returning. I was pleased with my progress and the dots of my training were connecting. Natural progression was to continue building solo time, leading to my first my first solo land away to Shobdon airfield.



The sponsor for my training was SkyDemon, an award-winning VFR flight-planning & navigation software company. I was fortunate that I could visit their HQ in Frome after a busy morning of flying. Meeting Tim Dawson and the SkyDemon team was a chance for me to share my story with them. A few days before the visit, I flew from Gloucester to Frome to spot the office from the air and see the Westbury White Horse. Overall, a successful and enjoyable visit down to Frome!

One of the systems in place to support you whilst training is a buddy – a previous scholar who completed the exact same scholarship. The Air Pilots paired me with a scholar who had embarked on an airline cadetship and ATPL training at Gloucestershire airport. The hardest theory subject for me was navigation and using the CRP-1 flight computer (I often called it the whiz wheel). Having someone to just share resources, tricks, or to talk through a method was valuable. The same challenges you are facing now were a similar experience to theirs. I thank my buddy for being patient and always willing to fill a gap in my knowledge. For future scholars, please make sure to stay in touch with your buddy during and after the scholarship!

As Gloucestershire airport is surrounded by uncontrolled airspace outside the ATZ, so truly anything and everything ends up flying around the airport. A crucial step in training is dealing with controlled airspace and transits of a MATZ. A great route to fit all of this in was flying a direct route from Gloucester to White Waltham, Maidenhead. White Waltham is partially situated in the London Control Zone and so I had added preparation to understand the local flying procedures and agreements. Soon after leaving Gloucester, I changed radio frequency to RAF Brize Norton to request a transit of the class D airspace. Following this would be a MATZ transit of RAF Benson, but upon checking with Brize they were not active – meaning for this flight and by default I was approved to fly in the MATZ but not the ATZ. This sortie by far was the most challenging as I was dealing with unfamiliar radio conversations and an unfamiliar navigation route. Being deliberate and methodical is vital when flying. Trusting in the clock, map, ground, and radio navigation aids would work; it is as if the method works!



Over the summer I was hindered by air traffic control shortages – which seeing the news in Summer 2024 had been affecting all the UK. Towards the start of the summer, the airport was just implementing the indemnity procedures and so business was as usual. However, soon an “Airport Advance Notice” (AAN) was issued that no training was approved on “no ATC days”. Simply, I had to plan my milestones and training around these dates. Another limitation to juggle alongside weather and the fact that G-BKDJ was due for its full maintenance schedule for all of August.

At this stage, I completed all my theory exams, with only the radio-telephony practical remaining. Having flown a fair number of dual and solo navigation sorties, the cross country qualifying (QXC) was looming. The route was Gloucester – Swansea – Shobdon – Gloucester. With the route, I can proudly say that I went “international” on my QXC flying from England to Wales and back. When preparing for a lengthy flight like this, come earlier than you think you need to arrive. Give yourself plenty time to do the correct flight planning and threat error management. The first leg (Gloucester – Swansea) was fine but noticed an encroaching and descending blanket of cloud. Upon landing at Swansea, I paid the landing fee first. To return airside, I went through the Cambrian Flying Club crew room – a full crew room greeted me and asked where my flying would take me. I mentioned Shobdon and they pointed to a TV screen with a weather radar on it – a thick cloud base had encroached at the northern hilltops of the Brecon Beacons (just the route I was going on).





I decided to plough on anyway and assess enroute, and ended up doing something I would describe as instrument flying for a good few minutes. I executed a rate one (ROT) 180 degree turn as trained to do and successfully diverted having remembered where the cloud was not present on the TV screen. I completed my third leg, returning to Gloucester safely and in suitable time.

After the QXC, I was launched into the revision phase. I was unsure how the mock skill test would go, finding the first navigation leg difficult due to poor weather and forward visibility. However, knowing the technique and safely executing them regardless of weather is important. With pointers in hand a few more hours of revision straightened these out.

The skill test was originally meant to be 7<sup>th</sup> September, but the weather was extremely poor and overcast cloud was around 1300ft. That day, I did not receive a route to plan as it was 30/70 to go ahead. Around 1400 on that day, we decided to postpone the test to 15<sup>th</sup> September. On the test day, the route to plan was Gloucester – Daventry – Bromyard. This was a straightforward first leg and then routing either below or through Birmingham control area approach. From my understanding, you never complete the second leg and will divert. In my case, I had a genuine weather diversion upon reaching overhead at Wellesbourne Mountford airfield turning to the disused airfield Barford St John. At the time, the wind was acting differently to my PLOG but fortunately wind turbines were visible. Using ground features to correct your drift correction on diversion is important. After the general handling, stalling, steep turns, and practice forced landings, I was instructed to fix my position by any means (bar asking for a QDM to Gloucester) and recover to rejoin Gloucester. When it is Sunday evening, everyone wants to go home, and so Gloucester airport was exceptionally busy with instrument traffic, business jets, circuit traffic, and helicopters all buzzing around. After five circuits of various configurations with several go-arounds in between, I landed back on runway 22. It felt surreal but after two hours and ten minutes, I taxied back to the hangar and the skill test was complete. After a positive debrief, my examiner congratulated me and told me I had passed!



The long-term personal goal is to become a test pilot, fusing the best of being an engineer and pilot together. I can only thank the Honourable Company of Air Pilots, SkyDemon, Cotswold Aero Club, Phil Mathews, Bristol UAS, and of course my family for all your generosity and vote of confidence in the path I set on back in 2020. My family and friends are all quite excited to come flying with me after all these years of training. Looking forward, I will be progressing on the RAF EFT(UAS) syllabus, which features training elements not in the PPL (notably spinning & aerobatics and instrument flying). I am deeply grateful for the wonderful summer filled with flying and look forward on working towards an ATPL after my apprenticeship.

