Thomas Pain

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I am a back-end Software Engineer at Midnite, an esports gambling scale-up, working in the Growth Engineering Team with a focus on building new products.

Prior to Midnite, I spent five years building a travel start-up where I was responsible for technology and product. I am also finishing the research project for my MSc in Computer Science with AI. For this, I am building a deep learning model for programmatic high-frequency currency trading.

Skills

Core skills
Python, TypeScript, JavaScript, Vue.js

Other skills (production)
SQL, AWS, Cloudflare, Nuxt, GraphQL

Other skills (non-production)
Java, Golang, Azure

Relevant qualifications

Education
MSc Computer Science with Artificial Intelligence

Certifications
AWS - Cloud Essentials

Udacity - Python Nanodegree

Microsoft - Azure AI Fundamentals

Preferences

Work type
Remote

Positions
Back End, Full Stack

Experience level
Senior

Relevant Experience

Midnite - Software Engineer (back-end)   05/2022 - Present

Midnite is post-series A ($22m in 2022-23) esport and sport betting platform with a focus on user experience. It presents technical challenges given its large volumes of live, risk-adjusted data and operations in 11 highly regulated countries with two brands, and multiple languages and currencies. I was initially hired in a full-stack role (Python, Flask, Vue, TypeScript, SQL, and AWS) but transitioned to a back-end focus due to increased workload.

- Worked in a small team to build our new casino and virtuals products from scratch, defining API contracts with client teams, building cloud-native APIs, and constructing back-end logic to support these products. Developed high-capacity services for real-time data transactions, prioritising reliability and responsiveness. Within two weeks of launch, casino more than doubled company revenue and virtuals added another 5%.
- Led the integration of VAIX, an AI tool for casino personalisation and recommendations
- Built the back-end split testing framework
- Full stack development for new welcome and sign-up bonus products to improve customer acquisition
- Engineered an algorithm for dynamic pricing adjustments based on risk assessment and bet volumes
- Built a prize allocation service for a free-to-play game, factoring in users' predicted LTV, recent betting history, and reward accumulation to boost engagement via statistically driven prize selection

Packed, Co-Founder and Software Engineer   03/2017 - 03/2022

Packed provided a marketplace of trusted and reliable holidays for groups. Pre-covid sales were up to £230k per month, however, covid put the company into a financially difficult position and we decided to close.

- Over 2,600 customers and £2.3m in sales
- Featured in The Times, the Evening Standard, the Metro and Condé Nast
- Built the MVP product using Python, Django, GraphQL, Vue with Vue Apollo, and AWS
- Managed three overseas contract developers, a contract designer and a mobile app development agency
- Designed and launched a React Native app with over 10,000 users across iOS and Android
- Responsible for the analytics stack and technical SEO, growing organic traffic to >10k users per month

Historic experience

True - Senior Associate   12/2016 - 08/2017

I worked closely with US and European tier-1 venture capital funds to help them strengthen the boards of their portfolio investments, regularly helping US technology companies scale into EMEA.

Oliver James - Head of Digital, Marketing and Design & Development Practices   01/2015 - 12/2016

I built the teams from scratch, was promoted three times in two years and managed 14 people.

Outgoing - Product Manager   05/2011 - 09/2013

I was responsible for the department's financial performance, delivering all aspects of the passenger experience, and managing six full-time staff and up to 110 seasonal staff. Increased passenger numbers from 1,600 in 2010/11 to almost 15,000 passengers in 2012/13.

Sisu Capital Ltd – Intern, Distressed Debt and Operations   12/2007 - 02/2008

Internship at a distressed debt hedge fund

3D Currency Management – Intern   09/2007 - 10/2007

Internship at a hedge fund trading securitised debt in the FX market

Sigma Wealth Management – Intern and continued part-time work   07/2007 - 08/2009

Developed a model to track fund-based renewal, researched investment opportunities and assisted with report writing and due diligence

Education

University of York - MSc Computer Science with Artificial Intelligence, Distinction   2020 - 2023

- Current grade average: 75.5% (distinction) with only the research project remaining
- Modules: AI and Machine Learning, Applied AI, Algorithms and Data Structures, Advanced Programming, Big Data Analytics, Computer Architecture and Operating Systems, Computer and Mobile Networks, Software Engineering, and an AI-based research project. All modules are Java or Python based.
- Building a deep learning model for programmatic high-frequency Forex trading for my research project

Harvard University - HarvardX CS50 & CS50W Computer Science   2020 - 2021

- A 6-month course covering Python, JavaScript, SQL, Django, and React

University of Pennsylvania, The Wharton Business School - Business Strategy & Entrepreneurship   2016

- Part of the Wharton MBA, this was a six-month assessed remote learning course

Durham University – MSc Finance and Investment, Merit   2008 - 2009

Durham University – BA (Hons) Accounting and Finance, 2:1   2005 - 2008