Backpack

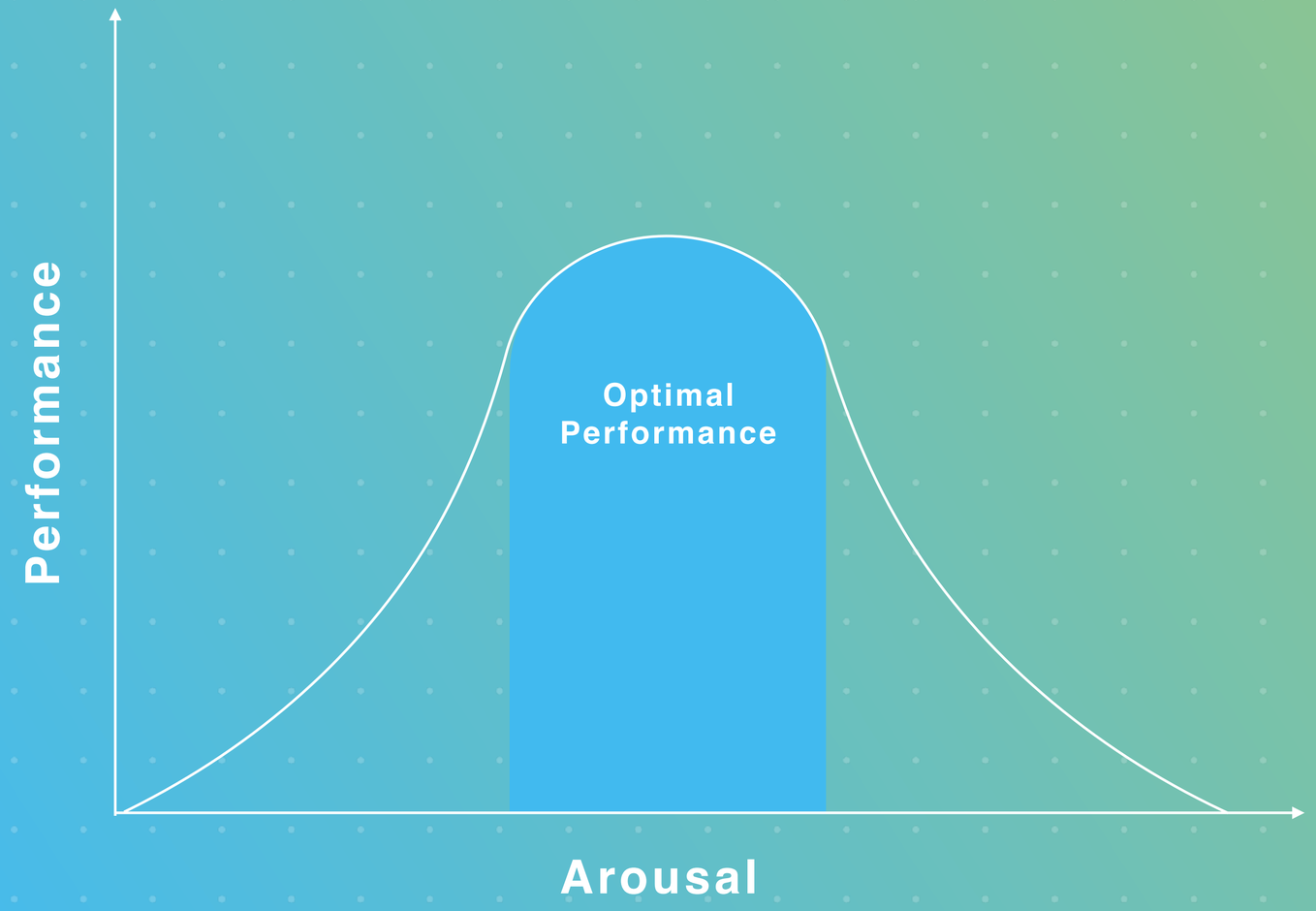
CHALLENGE

How Can Every Child Reach Their Full Potential?

With globalised competition and the increasing precariousness of low-skill work, education has never been so critical. Parents who can afford to, will now on average spend more than a £250,000 pounds for 14 years of private education. It is a small price to pay when the number one fear parents have is their child not getting the opportunities they need to reach their potential.

But what about those that cannot afford private education? When even tutors cost £25 an hour, most have to rely on state education. However, multiple studies have found an increasing North-South divide in quality. We wanted to use technology to give every child an equal opportunity to reach their full potential.

Redbull High Performance Psychology Model



INSIGHTS

Feedback Is the Key to Progress

One of the biggest differences between private and state schooling is the class sizes. Smaller class sizes allow students tighter feedback loops, accelerating their progress. Parents of children at state schools may only meet teachers once a year. This makes it difficult to optimise a child's education. If schoolwork is too easy they do not progress as fast as they could. If the work is too difficult, they can get frustrated and upset. Luckily we found out that studying at home has three times as much impact as school does. Our user research also discovered was that there was a critical transition as children grow more independent. For the first few years of school, homework is done at the kitchen table. Then overnight children will start studying alone in their room. Parents can quickly lose track and feel like they are nagging even when a child might need help.

SOLUTION

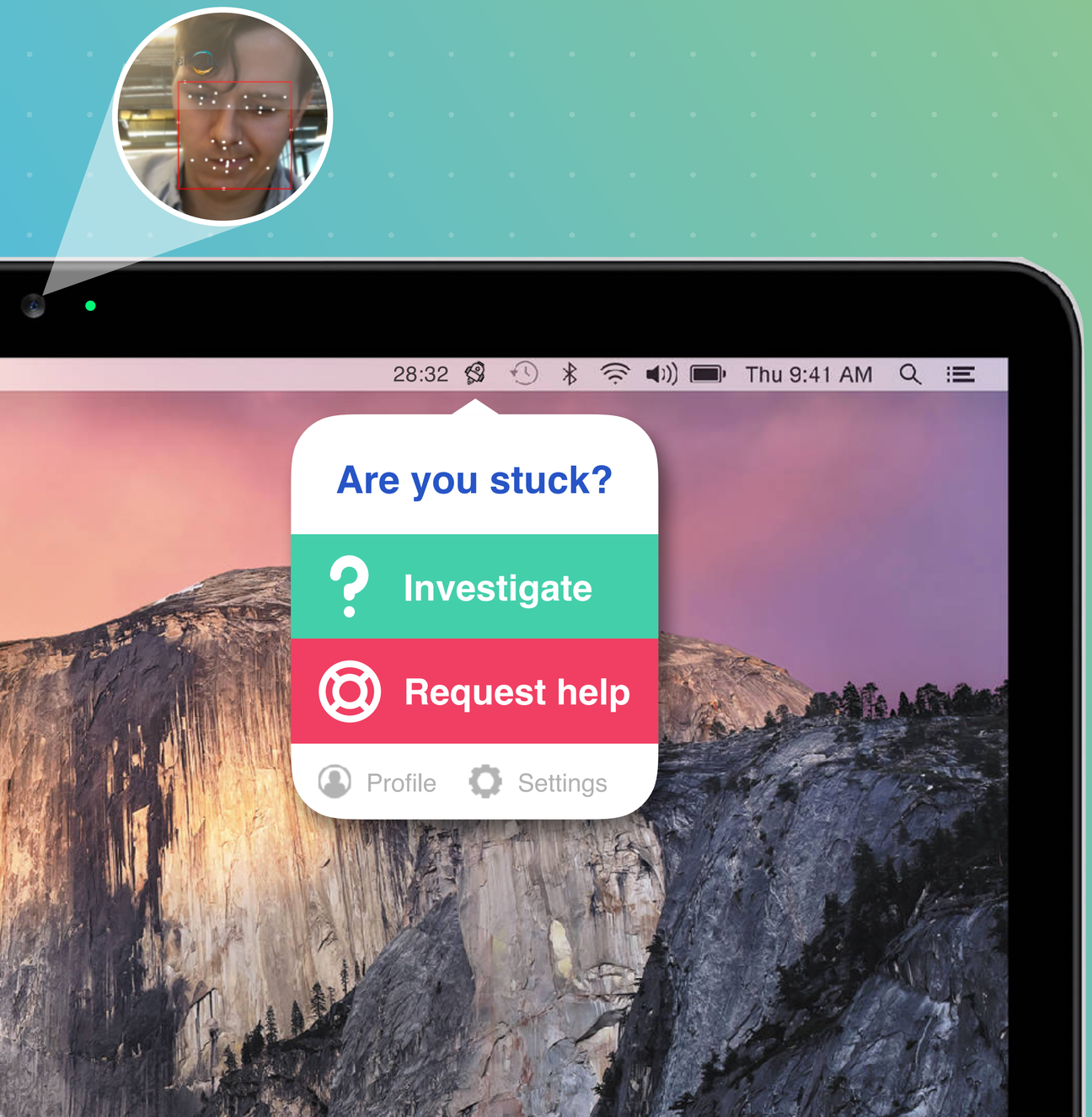
Backpack - The Study Buddy of the Future

Backpack uses affective computing to understand a child's emotions and engagement as they do their homework. Overtime this reveals a child's individual learning style and habits. With these insights, parents and children can maximise their learning to help the child reach their potential.

Backpack also helps in the moment. When frustration is detected, the system can offer to find answers or even notify a parent to assist.

Features:

- Emotion & engagement tracking
- Parental notifications
- Granular web blocking
- Voice or text safe search
- Insights dashboard
- Facial data never recorded
- Curriculum/homework agnostic



HOW IT WORKS

Emotion & Engagement Tracking

Highly trained machine learning algorithm can read the human face and deduce a person's expressions and emotions. Studies show automatic recognition of facial expressions can track student engagement in real time and later predict student test performance. Combined with simple eye tracking, we can also deduce how attentive or distracted the student is whether they are working on or in front of their laptop or phone.

If a student does appear distracted or frustrated Backpack can trigger a pop up offering help with finding an answer or notifying a parent that they would appreciate some assistance.

HOW IT WORKS

Voice Powered Learning Assistance

A smart assistant is built into Backpack to encourage independent learning. Only offered when necessary, it can surfaced help from subject specific, white-listed resources with voice or text search. For example, if the child was studying maths, information would be pulled from Wolfram Alpha. This prevents distraction and keeps students on task rather than getting distracted online.

HOW IT WORKS

Child Safety & Parental Notifications

Ensuring children would be safe using Backpack had to be a priority. The emotional recognition API used can work without ever transmitting facial data from the device. Backpack also allows granular web blocking so parents know their children are only accessing websites that help them learn.

Notifications can be sent to the parent's phone to assure them when their child is studying. Notifications are also the main way that a child can call for assistance. This is a popular feature with parents who want to help but do not want to unnecessarily disturb their children.

HOW IT WORKS

Data Dashboard

Both the parent and the student can look back at their home learning through a dashboard that quantifies their activity.

As soon as a session ends, information is displayed including time spent, engagement, the level of frustrations, emotions and learnings.

Over time these data based insights can inform decisions on the future of a child's education. In the future, we could also potentially advise on future career options with this same rich data.

LAUNCH

Go-to-Market Strategy

Data Driven White Papers

We can use the anonymised data we collect to produce educational white papers. Knowing the rabid appetite the press has for anything about what might help a child learn, we think these could be PR gold dust.

Referral Scheme

Parents talk. We will use an Uber-style referral scheme to allow parents to receive free months for onboarding other parents.

Affiliate Scheme

Tutors & nannies are often working for the extra cash. Backpack will use an affiliate scheme that gives them cash for introducing the service to their clients.

Advertising Push During Exams

Parents are desperate to give their child an edge and are on high alert during exam periods. Campaigns would be targeted around these stressful periods to parents and students.

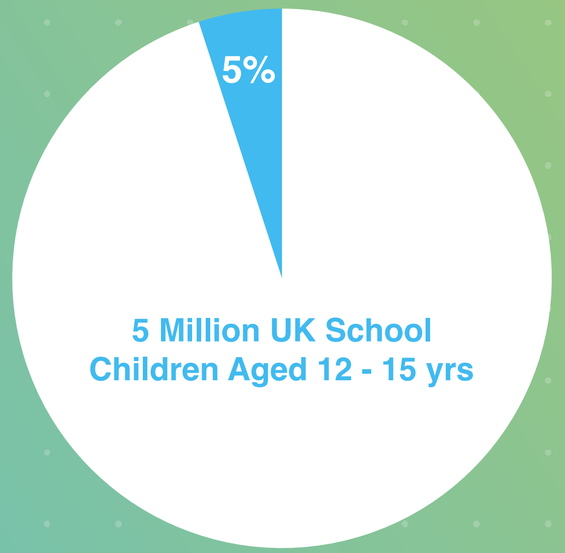
BUSINESS MODEL + VISION

Education as a Service

Backpack can offered to every child in the UK at a highly competitive price. One hour of tutoring would cost the same as a year of Backpack's data-driven insights and homework help. Even just capturing a 5% market share would lead to yearly revenues of over £6 million. With an expected lifetime value of a customer at £127.50, it would allow for a generous Customer Acquisition Cost.

Educational Technology is expected to nearly triple to being a £129Bn industry by 2020. But by being B2C and entirely curriculum agnostic, Backpack has the potential to be one of the most scalable startups in the space. Only a little translation is needed to take it global. So wherever you are, whatever you are learning, Backpack can be there to help you reach your potential.

Target Market Share



1 Hour of Tutoring = £25
1 Year of Backpack = £25
5M x 5% x £25 =

£6.2M Yearly Revenue