What does Stripe do?

Because half of the fanboys have never even used the product

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The TL;DR

Stripe sells **payments infrastructure for internet businesses**: primarily, they help you bill your customers, process payments, and work with your payment data.

- Accepting payments on the web is a **pain in the ass** that requires **special bank accounts** and working with companies with names like SecureNet and Authorize.Net (yikes)
- Stripe gives developers a **set of simple APIs** for accepting and managing payments, and a **web interface** to explore and manage data manually
- Stripe has **expanded their product suite** over time to include broader financial services and data products

In the developer world (and tech more broadly), Stripe is known as the gold standard for how to market to and build products for a technical (read: software engineer) audience. They're also worth $36B, and are expanding into broader financial services.

The core: payments

Stripe offers a lot of products, which can make it difficult to understand what they do exactly. To avoid that problem, let's pretend that we're a company called Dubstack that lets people create and write newsletters (just an idea off the top of my head). In order to let our users get paid for their content, we need to do a bunch of things:

- Be able to store and charge a credit card number
- Allow users to select monthly or yearly plans, and charge them every interval

- Generate and send invoices (if so requested)
- Work with payment data ad hoc (refund a customer, etc.)

This is a lot of work. And it's not the kind of developer work that's *straightforward* and time consuming - it's *difficult* and time consuming. Your typical developer doesn't have experience working with payment processing, and your typical early stage startup doesn't have a finance guru who can help that developer.

Stripe takes care of all of this for you via really well designed APIs. You don't need to worry about storing data, charging cards, or managing subscriptions. Let's walk through a couple of examples of API endpoints that we might use in our day-to-day at Dubstack.

> 🧠 **Jog your memory** 🧠
>
> An API takes input data and performs some sort of task for you, typically returning some new data. In Stripe's case, you might tell one of their APIs to create a new customer in their system, and give them an email address to use. For more info, read the full What's an API explainer here.
>
> 🧠 **Jog your memory** 🧠

→ **Charging a credit card**

When a user signs up for a paid plan, we need to charge their card so we can pay the rent. Stripe's charge creation API lets you send a basic HTTP request with an amount and an optional customer ID.

```
curl https://api.stripe.com/v1/charges \
  -u sk_test_4eC39HqLyjWDarjtT1zdp7dc: \
  -d amount=2000 \
  -d currency=usd \
```

All you need to do is make the request - Stripe takes care of everything else.

(Note: Stripe is migrating over to a new API called Payment Intents)

→ Updating customer information

Instead of maintaining our own database of paying users and their card information, Stripe takes care of storing all of that securely, and gives us nice APIs to read and update that information. If one of our customers needs to change their credit card information (Citi Double Cash is giving 2% cash back on everything now so this is completely reasonable), we'd use Stripe's [customer endpoint]:

```
curl https://api.stripe.com/v1/customers/cus_IHlSyIQldcZgPg \
  -u sk_test_4eC39HqLyjWDarjtT1zdp7dc: \
  -d "metadata[order_id]"=6735
```

Each customer in Stripe has a unique ID (cus_IHlSyIQldcZgPg in this example). To update that customer, we just need to find that ID, append it to the base endpoint, and send over what data we want to change. This API might power a simple form we have on our site that lets users input their new info.

→ Cancelling a subscription

If our loyal readers are dumb and want to unsubscribe from a paid plan, we need to stop charging them and refund their prorated balance. Stripe's [subscriptions endpoint] lets you do that too:

```
curl https://api.stripe.com/v1/subscriptions/sub_AfFjc0iXtLSAxo \
  -u sk_test_4eC39HqLyjWDarjtT1zdp7dc: \
  -X DELETE
```

Like in the previous example, we need to specify to Stripe which subscription ID we want to cancel. We can also get into the details and decide to invoice the customer for their remaining balance, or prorate the cancellation.

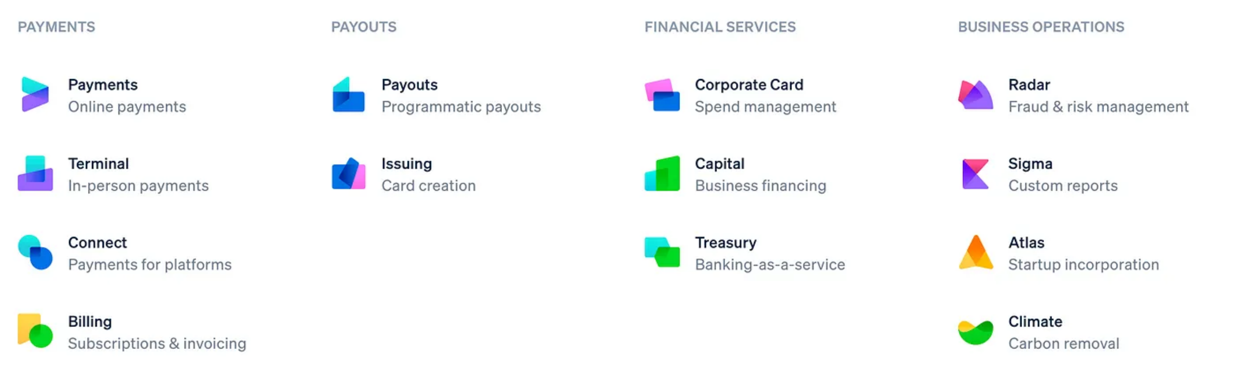
So basically Stripe takes care of all of this annoying stuff that we would have to build in house otherwise. The three examples we gave here involve taking *action* (i.e. they're POST requests), but Stripe APIs also allow you to *read* (i.e. GET) your data and use it across your application.

> 🚨 **Confusion Alert** 🚨
>
> To use Stripe, you (generally - see below) still need to build a frontend on your site to actually ask your users for their name, email, credit card info, etc. But instead of storing that data yourself, you just send it right over to Stripe's APIs from that form. This is usually what it means to be an "API company."
>
> 🚨 **Confusion Alert** 🚨

Expanding product lines

Payments (accepting and managing card and customer info) and billing (subscriptions and invoices) are Stripe's two primary product lines, and if I had to guess, account for the overwhelming majority of their revenue. But as any company does as they grow (a lot), Stripe has released new product lines that integrate with each other and draw companies like Dubstack further into their ecosystem.

On their site, Stripe organizes their products into 4 categories:



PAYMENTS

Payments
Online payments

Terminal
In-person payments

Connect
Payments for platforms

Billing
Subscriptions & invoicing

PAYOUTS

Payouts
Programmatic payouts

Issuing
Card creation

FINANCIAL SERVICES

Corporate Card
Spend management

Capital
Business financing

Treasury
Banking-as-a-service

BUSINESS OPERATIONS

Radar
Fraud & risk management

Sigma
Custom reports

Atlas
Startup incorporation

Climate
Carbon removal

I think it's actually simpler to organize them into 3 categories:

1. **Payments**

In addition to payments and billing, Stripe also offers:

- Terminal - a physical POS system to use in your donut shop or whatever

- Connect - lets you send payments out to your own customers (imagine you're running a marketplace)
- Payouts - lets you programmatically pay out your freelancers, users, or whatever have you (some overlap with Connect here that I don't understand)

Over the past 1-2 years, Stripe has released two new lil' products under payments that I think are very important:

- Checkout - a fully out of the box, Stripe hosted checkout page for taking in credit card info from new customers
- Portal - a fully out of the box, Stripe hosted billing portal where customers can update their info and adjust / cancel their subscriptions

Generally, you need to build the frontend (a web page with a form) that you *back* with the Stripe APIs - these two products mean you barely have to build *anything*. These haven't gotten a ton of fanfare yet, but I've used them personally and they're pretty awesome if you're resource constrained.

2. **Financial Services**

This has been Stripe's most experimental area.

- Issuing - an API for creating credit cards (physical or digital)
- Corporate Card - lets you create and manage corporate cards for your company
- Capital - access to debt financing for growing businesses
- Atlas - easy company incorporation and formation (LLCs, C-Corps, etc.)
- Treasury - banking as a service (hold funds, payouts, etc.)

The overlap between Issuing and Corporate Cards can be a bit confusing, but you can think of Issuing as a service if you want to create *external* cards (e.g. Venmo releasing a Venmo card), and Corporate Cards as a service for creating *internal company* cards (so you can expense the "friday" happy "hour").

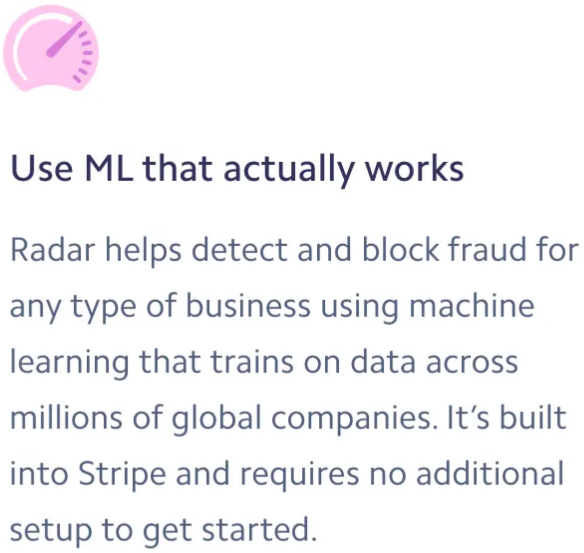
As is often the case, each one of these product lines could be its own billion dollar business, which should be a reminder to all you kids of the power of product ecosystems when done right.

3. **Working With Data**

In addition to helping you do stuff - like charging cards and updating subscriptions - Stripe is also your system of record for payments. They store all of the data around who your customers are, what their payment info is, when they've been charged, and lots more like that. So naturally, Stripe offers tools for working with and understanding that data:

- Sigma - lets you write SQL against your Stripe data, and save and share queries with your team
- Radar - automatic fraud detection and alerting so you don't get scammed

These two products have been around for a while. Coincidentally, the marketing page for Radar has one of my favorite pieces of headline copy - "Use ML that actually works":



Use ML that actually works

Radar helps detect and block fraud for any type of business using machine learning that trains on data across millions of global companies. It's built into Stripe and requires no additional setup to get started.

Shots fired, Stripe copywriting team.

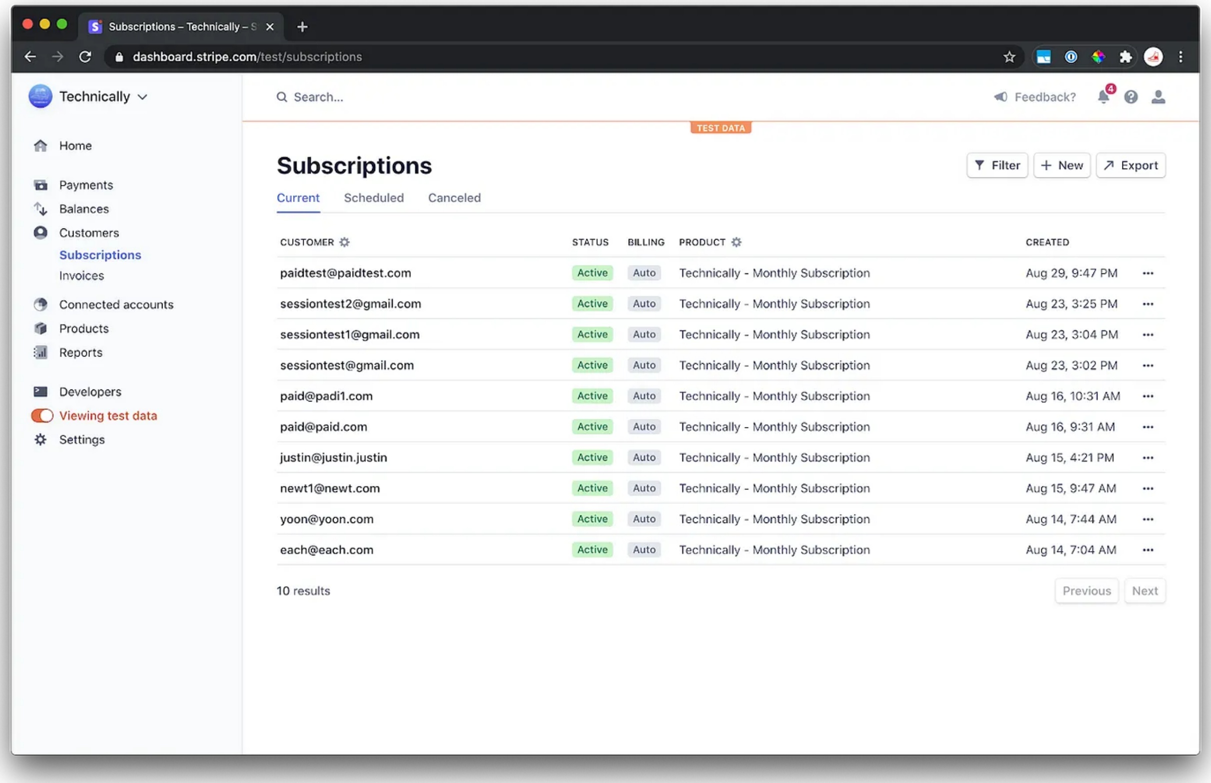
These categories don't map to what makes money for Stripe per se (you could organize products into loss leaders and money makers). They also recently added Climate, which doesn't fit cleanly into any of these categories.

The UI, the pricing, and the fanfare

→ The UI / web interface

We've focused mostly on Stripe's APIs, and to be fair, they're what has gotten them this far - especially as a company focused primarily on serving a technical audience of software engineers. But Stripe also has a very nice web interface for when you need to search your customer base, quickly update a subscription, or check a payment for fraud in Radar.

I can take a look at Dubstack's active subscriptions:

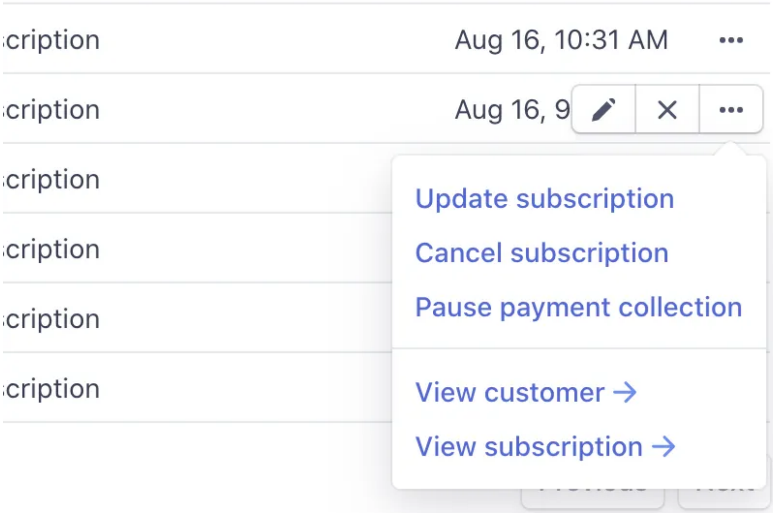


Subscriptions

CUSTOMER	STATUS	BILLING	PRODUCT	CREATED
paidtest@paidtest.com	Active	Auto	Technically - Monthly Subscription	Aug 29, 9:47 PM
sessiontest2@gmail.com	Active	Auto	Technically - Monthly Subscription	Aug 23, 3:25 PM
sessiontest1@gmail.com	Active	Auto	Technically - Monthly Subscription	Aug 23, 3:04 PM
sessiontest@gmail.com	Active	Auto	Technically - Monthly Subscription	Aug 23, 3:02 PM
paid@padi1.com	Active	Auto	Technically - Monthly Subscription	Aug 16, 10:31 AM
paid@paid.com	Active	Auto	Technically - Monthly Subscription	Aug 16, 9:31 AM
justin@justin.justin	Active	Auto	Technically - Monthly Subscription	Aug 15, 4:21 PM
newt1@newt.com	Active	Auto	Technically - Monthly Subscription	Aug 15, 9:47 AM
yoon@yoon.com	Active	Auto	Technically - Monthly Subscription	Aug 14, 7:44 AM
each@each.com	Active	Auto	Technically - Monthly Subscription	Aug 14, 7:04 AM

10 results

And then cancel one if I don't like them:

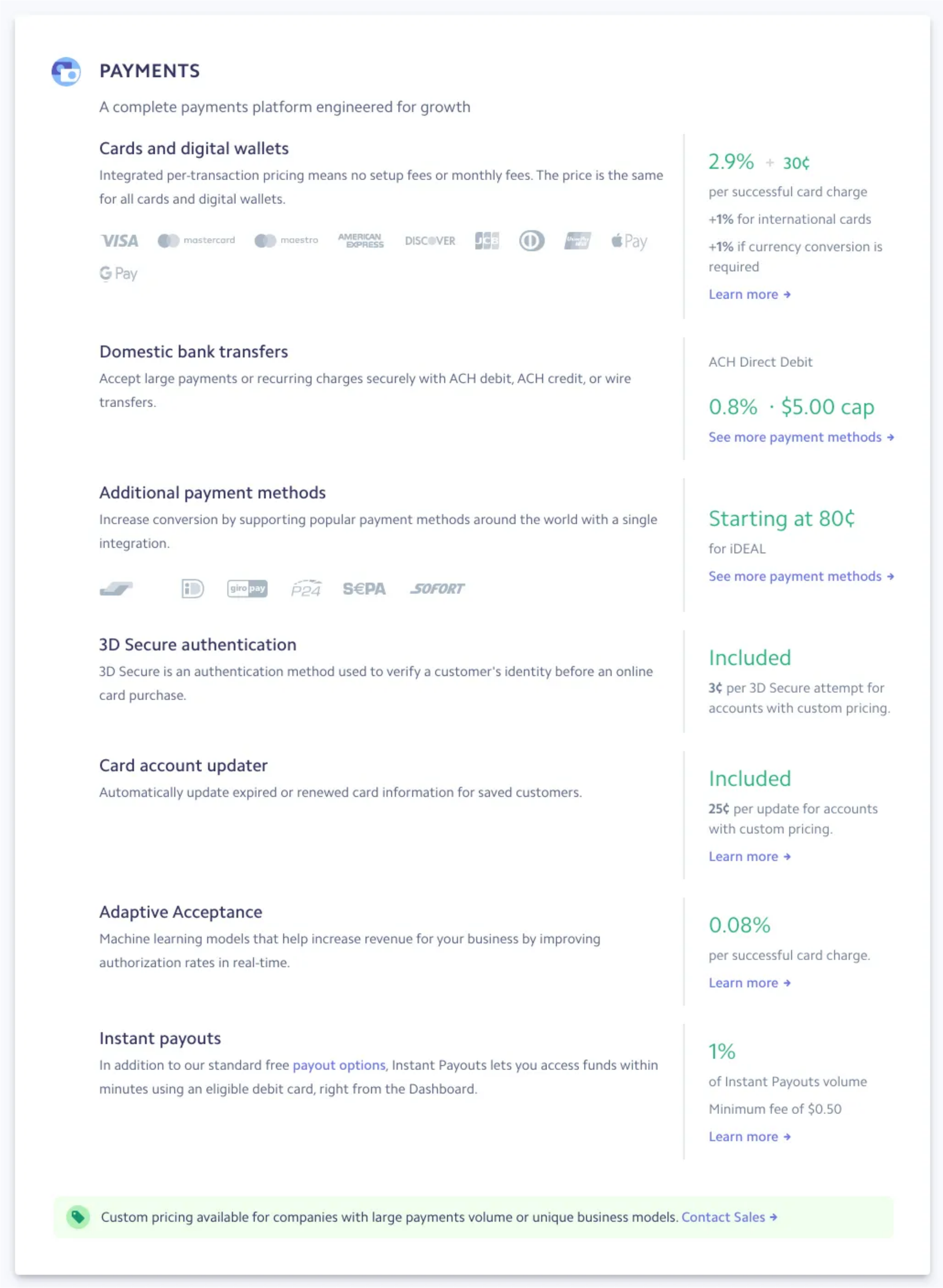


Stripe also gives you a UI for viewing your customers, individual charges, invoices, and many other useful things like universal search.

→ Pricing

As with any developer focused startup with multiple product lines, Stripe pricing is complicated and confusing.

For payments, Stripe charges 2.9% + 30 cents for each successful charge. You'll also need to deal with separate pricing models for domestic bank transfers (0.8% with a $5 cap), additional payment methods, and instant payouts. If you want Radar, that's 5 cents per screened transaction, *but* it gets waived for accounts with standard pricing. Sigma starts at 2 cents per charge (even though Sigma isn't used for charges, which is weird), and "infrastructure fees may apply," whatever that means. Oh, and you can pay for premium support, which *starts* at $1,800 a month but you'll need to get in touch with sales to get an actual quote.



PAYMENTS

A complete payments platform engineered for growth

Cards and digital wallets

Integrated per-transaction pricing means no setup fees or monthly fees. The price is the same for all cards and digital wallets.

2.9% + 30¢

per successful card charge

+1% for international cards

+1% if currency conversion is required

Learn more →

Domestic bank transfers

Accept large payments or recurring charges securely with ACH debit, ACH credit, or wire transfers.

ACH Direct Debit

0.8% · $5.00 cap

See more payment methods →

Additional payment methods

Increase conversion by supporting popular payment methods around the world with a single integration.

Starting at 80¢

for iDEAL

See more payment methods →

3D Secure authentication

3D Secure is an authentication method used to verify a customer's identity before an online card purchase.

Included

3¢ per 3D Secure attempt for accounts with custom pricing.

Card account updater

Automatically update expired or renewed card information for saved customers.

Included

25¢ per update for accounts with custom pricing.

Learn more →

Adaptive Acceptance

Machine learning models that help increase revenue for your business by improving authorization rates in real-time.

0.08%

per successful card charge.

Learn more →

Instant payouts

In addition to our standard free payout options, Instant Payouts lets you access funds within minutes using an eligible debit card, right from the Dashboard.

1%

of Instant Payouts volume

Minimum fee of $0.50

Learn more →

Custom pricing available for companies with large payments volume or unique business models. Contact Sales →

(This is the pricing sheet for just payments)

Stripe is expensive, but that value developers get from it is so colossal that they're not losing too many customers to "I went with the cheaper option." And pricing multiple products and services is very, very hard (I worked on this at DigitalOcean, it's not fun). So I don't necessarily blame them for this nightmare of a pricing page. Still, I wonder if a pricing calculator and some intelligently designed bundles could make all of this a lot simpler.

→ **The Fanfare**

If you work in tech, you probably already know that Stripe is *basically worshipped* in the community. Their APIs, site design, product detail, support, and documentation are generally held in quite high esteem. It's also considered a great place to work, to the point where "we're hiring at Stripe" has become a meme across Twitter. Daily, you'll see threads lauding the company from people who haven't even used the product – which to me seems…weird.

Now I'm no culture analyst - I'm just here to explain how the tech works. The important part is that Stripe's reputation among developers - their core audience - is rock solid, and as a user myself, their APIs and documentation are indeed quite excellent. So generally, if you're trying to cut through the noise and understand if something is actually good or not, look at what the actual users are saying.

Further Reading

- A guide on how to accept internet payments if you're *not* using Stripe is a good advertisement for Stripe
- There are plenty of Stripe alternatives that generally fly under the radar but should get more attention, like Adyen
- Stripe's guide to PCI compliance does a good job explaining why building your own systems is so hard

3 Comments

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Ben Feb 2, 2021 ♥ Liked by Justin

Hey Justin, another great article. Can I request Coinbase sometime? Thank you!

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