in Telegram Message Summarizer Bot - Complete Setup Guide

Welcome! This guide will help you set up your own Telegram bot that summarizes group chat messages. **No coding knowledge required!** Just follow these steps carefully.

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What You'll Need

Before starting, make sure you have:

- 🗸 A Telegram account
- 🗸 A GitHub account (free sign up at github.com (https://github.com))
- An Anthropic account (you'll need to add payment details, but costs are very low typically \$0.01-0.05 per summary)
- About 30-45 minutes of time
- This bot code (you already have it!)

Cost Estimate:

- Telegram Bot: FREE 🔆
- GitHub: FREE 🔆
- Railway/Render: FREE tier available (sufficient for most users) 🔑
- Anthropic API: Pay-as-you-go with **Haiku** (DEFAULT) approximately \$0.0001-0.0005 per summary (very cheap!)
- 100 summaries $\approx $0.01-0.05$
- 1000 summaries $\approx $0.10-0.50$

Step 1: Create Your Telegram Bot

1.1 Open Telegram and Find BotFather

- 1. Open the Telegram app on your phone or computer
- 2. In the search bar at the top, type: @BotFather
- 3. Click on the official BotFather (it has a blue verification checkmark ✓)
- 4. Click **START** at the bottom

1.2 Create Your New Bot

- 1. Send this message to BotFather: /newbot
- 2. BotFather will ask you to choose a **name** for your bot
 - Example: "My Message Summarizer"
 - Type your chosen name and send it
- 3. BotFather will ask you to choose a username for your bot
 - Must end with "bot" (e.g., "MySummarizerBot" or "message summary bot")
 - Must be unique (not already taken)
 - Example: my summarizer bot
 - Type your chosen username and send it
- 4. **SUCCESS!** BotFather will send you a message containing your **Bot Token**
 - It looks like this: 6234567890:ABCdefGHIjklMNOpqrsTUVwxyz-1234567890
 - IMPORTANT: Keep this token secret! Anyone with this token can control your bot

1.3 Save Your Bot Token

- 1. Copy the entire token (it's a long string of numbers, letters, and symbols)
- 2. Save it in a safe place you'll need it soon
 - Example: Create a text file on your computer called "bot-credentials.txt"
 - Paste the token there

1.4 Configure Your Bot Settings (Optional but Recommended)

Send these commands to BotFather to set up your bot:

1. Set a description (what users see when they first start your bot):

/setdescription

- Choose your bot from the list
- Send: "I can summarize group chat messages! Just mention me to get a summary."
- 2. Set a profile picture (optional):

/setuserpic

- Choose your bot
- Upload an image
- 3. Enable Group Privacy OFF (so bot can read messages):

/setprivacy

- Choose your bot
- Click **Disable**
- This allows the bot to see all messages in group chats

✓ Step 1 Complete! You now have:

- Your Bot Token (saved safely)
- Your Bot Username (remember it!)

Step 2: Get Your Anthropic API Key

Anthropic provides the Claude AI that creates the summaries. You'll need an API key.

2.1 Create an Anthropic Account

- 1. Go to https://console.anthropic.com/ (https://console.anthropic.com/)
- 2. Click Sign up and create your account
- 3. Verify your email address
- 4. Log in to your account

2.2 Add Payment Information

- 1. After logging in, you'll see a message about adding payment details
- 2. Click on your profile icon or settings (top right corner)
- 3. Go to Billing → Payment methods
- 4. Click Add payment method
- 5. Enter your credit/debit card information

« Important Notes About Costs:

- Anthropic charges pay-as-you-go (you only pay for what you use)
- Claude 3 Haiku (DEFAULT) costs approximately \$0.0001-0.0005 per summary (very cheap!)
- Example: 100 summaries ≈ \$0.01-0.05
- Example: 1000 summaries ≈ \$0.10-0.50
- Other models cost more (Sonnet: \$0.003-0.015, Opus: \$0.015-0.075 per summary)
- You can set spending limits in the Billing section
- Recommended: Set a limit of \$5-10/month to start (you'll likely use much less with Haiku)

2.3 Get Your API Key

- 1. Click on your profile icon or settings (top right)
- 2. Select API Keys
- 3. Click + Create Key
- 4. Give it a name (e.g., "Telegram Bot")
- 5. Click Create Key
- 6. **IMPORTANT:** Copy the key immediately you won't be able to see it again!
 - It looks like: sk-ant-api03-abcdefghijklmnopqrstuvwxyz1234567890...
- 7. Save it in your "bot-credentials.txt" file

Step 2 Complete! You now have:

- Anthropic account
- API Key (saved safely)
- Payment method added

Step 3: Upload Your Bot Code to GitHub

GitHub will store your bot code and connect it to the hosting service.

3.1 Create a GitHub Account (if you don't have one)

- 1. Go to https://github.com (https://github.com)
- 2. Click Sign up
- 3. Follow the steps to create your account
- 4. Verify your email

3.2 Create a New Repository

- 1. Log in to GitHub
- 2. Click the + icon in the top right corner
- 3. Select New repository
- 4. Fill in the details:
 - **Repository name:** telegram-summarizer-bot (or any name you like)
 - **Description:** "A bot that summarizes Telegram group messages"
 - Public or Private: Choose Public (free) or Private (if you prefer)
 - DO NOT check "Add a README file" (we already have one)
- 5. Click Create repository

3.3 Upload Your Bot Files

Option A: Using GitHub Web Interface (Easiest)

- 1. You should see a page that says "Quick setup"
- 2. Click on uploading an existing file
- 3. Drag and drop ALL these files from your computer:
 - bot.py
 - requirements.txt
 - .env.example
 - Procfile
 - railway.json
 - render.yaml
 - runtime.txt
 - README.md
 - SETUP_INSTRUCTIONS.md (this file!)
- 4. Scroll down and click Commit changes

Option B: Using Git Command Line (For Advanced Users)

If you're comfortable with the command line:

```
cd telegram_summarizer_bot
git init
git add .
git commit -m "Initial commit"
git branch -M main
git remote add origin https://github.com/YOUR_USERNAME/telegram-summarizer-bot.git
git push -u origin main
```

Step 4: Deploy Your Bot

Now let's make your bot run 24/7 in the cloud! Choose **ONE** of these options:

Option A: Deploy on Railway (Recommended)

Railway is beginner-friendly and offers a generous free tier.

4.1 Create a Railway Account

- 1. Go to https://railway.app (https://railway.app)
- 2. Click Login (top right)
- 3. Click Sign in with GitHub
- 4. Authorize Railway to access your GitHub account

4.2 Create a New Project

- 1. Click New Project (or + New)
- 2. Select Deploy from GitHub repo
- 3. Choose your telegram-summarizer-bot repository
- 4. Railway will start setting up your project

4.3 Add Environment Variables

This is where you'll add your Bot Token and Anthropic API Key!

- 1. Click on your deployed service
- 2. Go to the Variables tab
- 3. Click + New Variable for each of these:

Variable 1:

- Key: TELEGRAM_BOT_TOKEN
- Value: [Paste your bot token from Step 1]

Variable 2:

- Key: BOT USERNAME
- Value: [Your bot username WITHOUT the @ symbol]
- Example: If your bot is @MySummarizerBot, enter: MySummarizerBot

Variable 3:

- Key: ANTHROPIC API KEY
- Value: [Paste your Anthropic API key from Step 2]

IMPORTANT: Do NOT add the CLAUDE_MODEL variable!

- The bot is now configured to use Haiku (claude-3-haiku-20240307) by default
- Haiku works for ALL API tiers and is the most cost-effective model
- Only add this variable if you specifically need a different model AND have verified access
- Most 404 model errors are caused by this variable being set incorrectly!

Variable 4 (Optional - Usually NOT needed):

- Key: MESSAGE_LIMIT
- Value: 75

Variable 5 (Optional - Usually NOT needed):

- Key: MAX MESSAGE AGE HOURS

- Value: 24

1. The bot will automatically restart with the new variables

4.4 Verify Deployment

- 1. Go to the **Deployments** tab
- 2. You should see a deployment with status "SUCCESS" and "ACTIVE"
- 3. Click on View Logs to see your bot starting up
- 4. Look for a message like: "Bot is starting..."

4.5 Monitor Usage (Stay Within Free Tier)

Railway free tier includes:

- \$5 of free credits per month
- Shared resources

To check your usage:

- 1. Go to your project dashboard
- 2. Click on **Usage** (bottom left)
- 3. Monitor your monthly usage



Skip to Step 5

Option B: Deploy on Render

Render is another great free hosting option.

4.1 Create a Render Account

- 1. Go to https://render.com (https://render.com)
- 2. Click Get Started
- 3. Sign up with GitHub (click **GitHub** button)
- 4. Authorize Render to access your GitHub account

4.2 Create a New Web Service

- 1. Click **New +** (top right)
- 2. Select Background Worker
- 3. Click Connect next to your GitHub account
- 4. Find and click Connect on your telegram-summarizer-bot repository

4.3 Configure Your Service

Fill in these settings:

1. Name: telegram-summarizer-bot (or any name)

2. Region: Choose the closest region to you

3. **Branch:** main

4. Runtime: Python 3

5. **Build Command:** pip install -r requirements.txt

6. **Start Command:** python bot.py

7. Instance Type: Select Free

4.4 Add Environment Variables

Scroll down to the **Environment Variables** section:

1. Click Add Environment Variable for each of these:

Variable 1:

- Key: TELEGRAM BOT TOKEN

- Value: [Paste your bot token from Step 1]

Variable 2:

- Key: BOT USERNAME

- Value: [Your bot username WITHOUT the @ symbol]

Variable 3:

- Key: ANTHROPIC_API_KEY

- Value: [Paste your Anthropic API key from Step 2]

⚠ IMPORTANT: Do NOT add the CLAUDE_MODEL variable!

- The bot is now configured to use Haiku (claude-3-haiku-20240307) by default
- Haiku works for ALL API tiers and is the most cost-effective model
- Only add this variable if you specifically need a different model AND have verified access
- Most 404 model errors are caused by this variable being set incorrectly!

Variable 4 (Optional - Usually NOT needed):

- Key: MESSAGE LIMIT

- Value: 75

Variable 5 (Optional - Usually NOT needed):

- Key: MAX MESSAGE AGE HOURS

- Value: 24

1. Click Create Background Worker at the bottom

4.5 Verify Deployment

- 1. Wait for deployment to complete (usually 2-5 minutes)
- 2. You should see "Deploy succeeded" with a green checkmark
- 3. Click on **Logs** tab to see your bot running
- 4. Look for: "Bot is starting..."

4.6 Monitor Free Tier Usage

Render free tier includes:

- 750 hours per month (enough for 24/7 operation!)
- Shared resources

The service will automatically sleep after 15 minutes of inactivity, but will wake up when someone uses the bot.



Step 5: Add Your Bot to a Telegram Group

Now let's add your bot to a group so it can start summarizing messages!

5.1 Open Your Group Chat

- 1. Open Telegram
- 2. Go to the group where you want to add the bot
- 3. Note: You must be an admin of the group to add bots

5.2 Add the Bot

- 1. Click on the group name at the top
- 2. Click Add Members (or Invite to Group)
- 3. Search for your bot's username (e.g., @MySummarizerBot)
- 4. Select your bot
- 5. Click Add or Invite

5.3 Make the Bot an Admin (Important!)

For the bot to read messages, it needs to be an admin:

- 1. In the group settings, go to Administrators
- 2. Click Add Admin
- 3. Select your bot
- 4. **Uncheck** all permissions except:
 - Read Messages (this should be enabled by default)
- 5. Click Done or Save

5.4 Test the Bot

- 1. Send a regular message in the group: "Hello everyone!"
- 2. Send a few more messages to build up history
- 3. Now mention your bot: "@YourBotUsername summarize" or just "@YourBotUsername"
- 4. The bot should respond with a summary!
- ▼ Step 5 Complete! Your bot is now in your group!

Step 6: Use Your Bot

How to Get a Summary

There are **three ways** to use your bot:

Method 1: Mention the Bot

Type @YourBotUsername anywhere in a message:

@MySummarizerBot what did I miss?

Method 2: Use the /summary Command

Just type:

/summary

Method 3: Reply to a Message

Reply to any message in the group and mention the bot:

@MySummarizerBot summarize from here

What the Bot Does

- 1. Reads the last 75 messages (or whatever you set in MESSAGE LIMIT)
- 2. Only includes messages from the last 24 hours (or whatever you set)
- 3. Sends them to OpenAl for Al-powered summarization
- 4. Returns a clean, bullet-point summary
- 5. Tells you how many messages were summarized

Example Summary

- 📝 Summary:
- Meeting scheduled for Friday at 3 PM
- John will prepare the presentation slides
- Budget approval still pending from management
- Sarah shared the Q3 sales report link
- Team agreed to use the new project management tool
- Next review meeting in two weeks
- Summarized 45 messages from the last 24 hours.

Bot Commands

- /start Get welcome message and instructions
- /help Show help information
- /summary Get a summary of recent messages



Troubleshooting

Problem: Bot doesn't respond when mentioned

Possible Solutions:

1. Check if bot is online:

- Go to your Railway/Render dashboard
- Check the logs for errors
- Make sure the deployment status is "ACTIVE"

2. Verify bot privacy settings:

- Go to @BotFather on Telegram
- Send: /setprivacy
- Select your bot
- Make sure it's set to **DISABLED**

3. Check if bot is an admin:

- Go to group settings → Administrators
- Your bot should be listed there

4. Verify environment variables:

- Check Railway/Render dashboard
- Make sure all variables are set correctly
- No extra spaces in the values

Problem: Bot says "No messages available to summarize"

Cause: The bot can only see messages sent AFTER it was added to the group.

Solution:

- Wait for more messages to be sent in the group
- Have a short conversation (10-20 messages)
- Try mentioning the bot again

Problem: "Error generating summary" or "404 Model Not Found" error

This is the most common issue! If you see an error like:

- Error 404: model 'claude-3-5-sonnet-20241022' not found
- Error 404: model 'claude-3-opus-20240229' not found
- Model not available
- Any error mentioning a specific Claude model

What this means: Your API key doesn't have access to the specific Claude model being used.

Solution (Follow these steps in order):

Step 1: Delete the CLAUDE_MODEL environment variable (MOST COMMON FIX)

The bot now defaults to **Haiku** (claude-3-haiku-20240307), which works for ALL API tiers and is the cheapest.

On Railway:

- 1. Go to your project dashboard
- 2. Click on your service
- 3. Click the Variables tab
- 4. Look for a variable named CLAUDE_MODEL
- 5. If you see it: **DELETE IT** (click the trash icon)
- 6. Bot will auto-redeploy with Haiku as default

On Render:

- 1. Go to your service dashboard
- 2. Click **Environment** in the left menu
- 3. Look for CLAUDE MODEL variable
- 4. If you see it: **DELETE IT** (click delete button)
- 5. Click Save Changes

Step 2: Verify the fix in deployment logs

After redeployment, check logs for:

- **V Success:** ✓ Using default Claude model: claude-3-haiku-20240307 (Haiku works for all API tiers)
- X Still an issue: A CLAUDE_MODEL environment variable is SET to: (variable still exists delete it again)

How to view logs:

- Railway: Project → Service → Deployments → View Logs
- **Render:** Service → Logs tab

Step 3: Verify API key access in Anthropic Console

If Haiku still doesn't work, there may be an issue with your API key or account.

- 1. Visit Anthropic Console (https://console.anthropic.com/)
- 2. Log in to your account
- 3. Check API Keys:
 - Go to Settings → API Keys
 - Verify your API key is listed and active
 - Keys start with sk-ant-api03-
 - If unsure, create a new API key and update your bot's environment variable
- 4. Check Billing:
 - Go to **Settings** → **Billing**
 - Confirm you have a valid payment method
 - Check your current balance and usage
 - Ensure you haven't exceeded spending limits
 - Add more credits if balance is low
- 5. Check Organization/Tier:
 - Go to **Settings** → **Organization** (if available)
 - Check your API tier/plan
 - Most free accounts have access to Haiku

Step 4: Test your API key in Anthropic Workbench

To verify which models you have access to:

- 1. Visit Anthropic Workbench (https://console.anthropic.com/workbench)
- 2. Try different models in the dropdown:
 - claude-3-haiku-20240307 ← Should work for everyone
 - claude-3-sonnet-20240229 ← May require higher tier
 - claude-3-opus-20240229 ← May require higher tier
- 3. **Send a test message** (e.g., "Hello")
- 4. Note which models work you can only use these in your bot

Step 5: Understanding Model Availability

Model access by API tier:

Model	Availability	Notes
claude-3-haiku-20240307	✓ ALL tiers	DEFAULT - Fastest, cheapest, should always work
claude-3-sonnet-20240229	⚠ Most tiers	May require account verification
claude-3-opus-20240229	⚠ Higher tiers	May require higher API tier or spending
claude-3-5-sonnet-20240620	X Special access	Requires specific API access/ tier
claude-3-5-sonnet-20241022	X Special access	Latest model, limited availab- ility

Important: Anthropic doesn't publicly document which models are available per tier, but Haiku should work for ALL accounts.

Step 6: Try alternative models (only if Haiku fails)

If even Haiku doesn't work (rare), try these in order:

- 1. Set CLAUDE MODEL environment variable to: claude-3-sonnet-20240229
- 2. Redeploy and test
- 3. If that fails, try: claude-3-opus-20240229
- 4. If all fail, contact Anthropic support there may be an account issue

Additional Troubleshooting

If you see "401 Unauthorized" or "Authentication Failed":

- Your API key is incorrect or inactive
- Go to Anthropic Console → API Keys
- Create a new key and update your bot's environment variable
- Ensure no extra spaces or characters in the key

If you see "429 Rate Limit" or "Quota Exceeded":

- You've hit API usage limits or run out of credits
- Wait a few minutes and try again
- Check usage at Anthropic Console → Usage (https://console.anthropic.com/settings/usage)
- Add more credits if balance is low

If you see "500/503 Service Error":

- Temporary issue with Anthropic's service

- Wait 5-10 minutes and try again
- Check Anthropic Status (https://status.anthropic.com/)

Quick Checklist

Run through this to diagnose your issue:

- [] CLAUDE MODEL environment variable is **NOT set** (deleted)
- [] Deployment logs show: 🗸 Using default Claude model: claude-3-haiku-20240307
- [] ANTHROPIC API KEY is correct (starts with sk-ant-api03-)
- [] Anthropic account has valid payment method
- [] Anthropic account has available credits (check billing)
- [] API key works in Anthropic Workbench (https://console.anthropic.com/workbench)
- [] Anthropic Status (https://status.anthropic.com/) shows all systems operational

KEY REMINDER:

- The bot defaults to Haiku which should work for ALL API tiers
- Do NOT set CLAUDE MODEL environment variable unless you need a specific model
- If you're seeing 404 errors, 99% of the time it's because CLAUDE MODEL is set incorrectly
- **DELETE** the CLAUDE MODEL variable to fix most issues!

Problem: Bot stopped working after a few days

Possible Causes:

1. Free tier limits reached (Railway):

- Check your Railway usage dashboard
- You may need to upgrade or wait for next month

2. Service went to sleep (Render):

- Free tier services sleep after inactivity
- Just mention the bot again it will wake up

3. Anthropic credits depleted:

- Add more credits to your Anthropic account

Problem: "TELEGRAM_BOT_TOKEN not found" error in logs

Solution:

- Go to your deployment dashboard (Railway/Render)
- Check Environment Variables section
- Make sure TELEGRAM BOT TOKEN is set correctly
- Redeploy the service

How to View Logs

On Railway:

- 1. Go to your project dashboard
- 2. Click on your service
- 3. Click **Deployments**
- 4. Click View Logs

On Render:

- 1. Go to your dashboard
- 2. Click on your service
- 3. Click the Logs tab

Still Having Issues?

- 1. Check the logs first they usually show what's wrong
- 2. Verify all environment variables are set correctly
- 3. Make sure your Anthropic account has available credits
- 4. Restart the service on Railway/Render
- 5. Check that your bot has admin privileges in the group

Frequently Asked Questions

How much does it cost to run this bot?

Hosting: Free (Railway/Render free tiers)

Anthropic API (with Haiku - DEFAULT): Approximately \$0.0001-0.0005 per summary (extremely cheap!)

- 100 summaries ≈ \$0.01-0.05
- 1000 summaries $\approx $0.10-0.50$
- 10,000 summaries \approx \$1-5

Other models cost more:

- Sonnet: ~\$0.003-0.015 per summary
- Opus: ~\$0.015-0.075 per summary

Can I use this bot in multiple groups?

Yes! Your bot can be added to as many groups as you want. Each group's messages are kept separate.

How many messages can the bot summarize?

By default, it summarizes the last 75 messages from the past 24 hours. You can change this by modifying the environment variables:

- MESSAGE_LIMIT: Number of messages (default: 75)
- MAX MESSAGE AGE HOURS: Time range in hours (default: 24)

Is my chat data private?

- Your messages are sent to Anthropic's API for summarization
- Anthropic's data policy: https://www.anthropic.com/legal/privacy (https://www.anthropic.com/legal/privacy)
- The bot doesn't store messages permanently (only keeps last 100 in memory)
- For sensitive conversations, consider this before using

Can I change the bot's summarization style?

Yes! Edit the bot.py file and modify the prompt in the generate summary() function. For example:

- Change "maximum 8 points" to "maximum 5 points" for shorter summaries
- Add "use formal language" or "use casual language"
- Specify different focus areas

How do I update my bot after making changes?

- 1. Make changes to your code locally
- 2. Upload updated files to GitHub:
 - Go to your repository on GitHub
 - Click on the file you want to update
 - Click the pencil icon (Edit)
 - Make your changes
 - Click Commit changes
- 3. Railway/Render will automatically detect changes and redeploy

Can I use different Claude models?

Yes! The default model is now **claude-3-haiku-20240307** (works for ALL API tiers, fastest, and most cost-effective).

To use a different model:

- 1. Add the CLAUDE_MODEL environment variable in your deployment platform
- 2. Set it to one of these values:
- claude-3-haiku-20240307 **DEFAULT** (works for all tiers, fastest, cheapest)
- claude-3-sonnet-20240229 (balanced may require higher tier)
- claude-3-opus-20240229 (highest quality may require higher tier)
- claude-3-5-sonnet-20240620 (latest requires special API access)

Marning:

- Only change this if you've verified your API key has access to the model
- Test in Anthropic Workbench (https://console.anthropic.com/workbench) first
- Most users should leave this unset to use Haiku (the default)
- Setting this incorrectly is the #1 cause of 404 model errors!

How do I stop the bot?

Temporarily:

- Railway: Click on your service → Settings → Pause service
- Render: Click on your service → Settings → Suspend

Permanently:

- Delete the service from Railway/Render dashboard
- Delete the bot using @BotFather: /deletebot

Can other people use my bot?

Yes! Anyone can:

- Add your bot to their groups (if they have the bot username)
- Use the bot in groups where it's already added

The bot works for all group members - no special permissions needed to use it!

What if I lose my bot token?

Unfortunately, tokens can't be recovered. But you can generate a new one:

- 1. Go to @BotFather
- 2. Send: /token
- 3. Select your bot

- 4. You'll get a new token
- 5. Update the environment variable in Railway/Render

Note: The old token will stop working.

Need More Help?

- Check the logs in your Railway/Render dashboard
- Review the Troubleshooting section above
- Check Anthropic status: https://status.anthropic.com (https://status.anthropic.com)
- Check Telegram Bot API status: https://telegram.org (https://telegram.org)

Congratulations! 🎉



You've successfully set up your Telegram Message Summarizer Bot!

Your bot is now:

- Running 24/7 in the cloud
- <a> Ready to summarize messages in any group
- Accessible to all group members
- Powered by AI for intelligent summaries

Enjoy using your bot! 🚀

Pro Tips:

- Set a monthly spending limit on Anthropic to control costs
- Monitor your Railway/Render usage to stay within free tier
- Keep your tokens and API keys secure never share them!
- Read your deployment logs regularly to catch issues early

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