



(51) International Patent Classification:
Not classified

(21) International Application Number:
PCT/CN2019/127096

(22) International Filing Date:
20 December 2019 (20.12.2019)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant: **ALIPAY (HANGZHOU) INFORMATION TECHNOLOGY CO., LTD.** [CN/CN]; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN).

(72) Inventors: **LIU, Gan**; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN). **QI, Feng**; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN). **FU, Dapeng**; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN). **HUA, Zhigang**; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN). **YANG, Shuang**; No. 556 Xixi Road, 8th Floor, Section B, Suite 801-11, West Lake District, Hangzhou, Zhejiang 310000 (CN).

(74) Agent: **BEIJING BESTIPR INTELLECTUAL PROPERTY LAW CORPORATION**; Room 409, Tower B, Ka Wah Building, No. 9 Shangdi 3rd Street, Haidian District, Beijing 100085 (CN).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)
- without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: SYSTEM AND METHOD FOR EVALUATING RISK

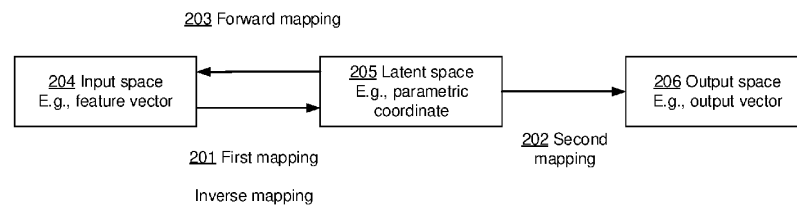


FIG. 2A

(57) Abstract: Methods, systems, and apparatus, including computer programs encoded on computer storage media, for evaluating risk are provided. One of the methods includes: obtaining a plurality of transactions each comprising a plurality of data dimensions, wherein some of the plurality of transactions are labelled as risky transactions and some of the plurality of transactions are labelled as safe transactions; obtaining at least one of the plurality of data dimensions as an output space and the plurality of data dimensions other than the at least one data dimension as an input space; initializing a first mapping from the input space to a latent space and a second mapping from the latent space to the output space, wherein the first mapping comprises mapping the input space to the latent space according to an inverse of a generalized linear model; and optimizing the first mapping and the second mapping to generate a Bezier surface.

